

DOCUMENT RESUME

ED 135 976

CE 009 814

AUTHOR Van Cleve, Roy R.
TITLE An Analysis of Selected Start-Up Industry Training Programs as Vehicles for Human Resources Development.
INSTITUTION Texas Univ., Austin. Center for the Study of Human Resources.
SPONS AGENCY Manpower Administration (DOL), Washington, D.C. Office of Research and Development.
PUB DATE Dec 76
GRANT DOL-21-48-74-01
NOTE 152p.; Some tables may be marginally legible
AVAILABLE FROM National Technical Information Service, Springfield, Va., 22151

EDRS PRICE MF-\$0.83 HC-\$8.69 Plus Postage.
DESCRIPTORS Demography; Economic Research; *Geographic Location; Human Resources; *Industrialization; *Industry; *Manpower Development; Program Effectiveness; Rural Areas; *Socioeconomic Influences; State Programs; Technical Education; Technical Occupations; *Trade and Industrial Education; Unemployed
IDENTIFIERS Alabama; North Carolina; South Carolina; Startup Industry Training Programs; Virginia

ABSTRACT

The "start-up" industry training concept has received considerable attention as a way to better match workers and jobs, to "leapfrog" the industrial development process by attracting higher-wage industry to an area through upgrading local work forces, and to make it possible to increase the wages of low-income workers. A study examined in detail the programs of South Carolina, North Carolina, Virginia and Alabama and their effect on industrial relocation trends and the leapfrogging of the unemployed and underemployed into the labor force. Comparative analyses were made of the accomplishments, operational and support organizations, costs, and the start-up processes of all four States. The results of the regression analysis and cluster analysis did not support the hypothesis that training programs had influenced industrial location. They constantly showed that counties which, pre-program wise, had favorable employment, high education, population, and industrialization, continued to have them, while those that did not continued to do without. (Author/HD)

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ED135976

AN ANALYSIS OF SELECTED START-UP INDUSTRY
TRAINING PROGRAMS AS VEHICLES FOR HUMAN
RESOURCES DEVELOPMENT

Roy R. Van Cleve*

December, 1976

U.S. DEPARTMENT OF HEALTH,
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DOL Grant 21-48-74-01

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STANDARD TITLE PAGE FOR TECHNICAL REPORTS	1. Report No. DLMA 21-48-74-01-1	2. Govt. Accession No.	3. Recipient's Catalog No.
4. Title and Subtitle An Analysis of Selected Start-Up Industry Training Programs as Vehicles for Human Resource Development		5. Report Date December, 1976	6. Performing Organization Code
7. Author(s) Roy R. Van Cleve		8. Performing Organization Rept. No.	10. Project/Task/Work Unit No.
9. Performing Organization Name and Address Center for the Study of Human Resources 107 West 27th Street Austin, Texas 78712		11. Contract/Grant No. DL 21-48-74-01	13. Type of Report & Period Covered Final Aug. 1973-1976
12. Sponsoring Agency Name and Address U.S. Department of Labor Manpower Administration Office of Research and Development 1411 20th St., N.W. Washington, D.C. 20210		14. Sponsoring Agency Code	
15. Supplementary Notes Extracts Presented - Task Force on Southern Rural Development, August, 1975. ASSA December 1975, Dallas.			
16. Abstracts The "start-up" industry training concept has received considerable attention as a way to better match workers and jobs, to "leapfrog" the industrial development process by attracting higher-wage industry to an area through upgrading local work forces, and to make it possible to increase the wages of low-income workers. This study examines in detail the programs of South Carolina, North Carolina, Virginia and Alabama and their effect on industrial relocation trends and the leapfrogging of the unemployed and underemployed into the labor force. The results of the regression analysis and cluster analysis did not support the hypothesis that training programs had influenced industrial location. They constantly showed that counties which, pre-program wise, had favorable employment, high education, population, and industrialization, continued to have them, while those that did not continued to do without.			
17. Key Words and Document Analysis: 17a. Descriptors Industrial plants Unemployment Industrial training Manpower requirements Manpower utilization Personnel selection Regional planning Rural areas Specialized training Technical schools			
17b. Identifiers/Open-Ended Terms Start-up industry training, Human Resource Development			
17c. COSATI Field/Group Dissertation, Abstracts			
18. Distribution Statement Distribution is unlimited. Available from National Technical Information Service, Springfield Va., 22151.		19. Security Class (This Report) UNCLASSIFIED	21. No. of Pages 130
		20. Security Class (This Page) UNCLASSIFIED	22. Price

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Chapter I

INTRODUCTION: THE PROBLEM AND PURPOSE OF THE STUDY

Rationale

One of the recommendations contained in the National Manpower Policy Task Force's "Statement of Manpower Policy and Programs in 1973" was that:

All training and pre-employment programs should be linked as closely as possible to jobs.... It is irresponsible to encourage or force people to enter and complete training programs only to return them to the unemployment pool because¹ the job openings for which they were trained disappeared.

The "start-up" industry training concept has received considerable attention as a way to better match workers and jobs, to "leapfrog" the industrial development process by attracting higher-wage industry to an area through upgrading local work forces, and to make it possible to increase the wages of low-income workers.

The "natural" process of rural development is for the initial development to be in marginal industries, which hire workers from agriculture; subsequently, as development occurs, higher-wage industries recruit workers from those marginal industries. In this way, work forces tend to be upgraded over a long period of time. By simultaneously creating jobs and recruiting, selecting, classifying and training workers in advance for those specific jobs, the "start-up" industry training concept has the potential of helping upgrade the nature and location of industry as well as rural work forces.

In doing this, there is no waste of training or worker effort in skill development for the general labor market in skills, which may or may not be in demand in the locale in which the worker desires to

1. National Manpower Policy Task Force, Manpower Policy Programs, A Look Ahead: 1973, December 20, 1972, p. 5.

work and live. All training is conducted to meet stated, specific job descriptions and training objective for the specified skills in the newly created positions.

Start-up industry training, by whatever name, is a demand-oriented training program that links training directly to specific jobs. It provides those trained with the skills required to perform specific jobs for specific companies at predetermined locations and in the locale of the worker's choice.

By 1972, 26 states reported having "State Funded Worker Training Programs," in various stages of planning, development, implementation, and operation (Appendix 1). These programs had as their stated general objectives:

- (1) Encourage the location of new and the expansion of existing industry by offering to assist in the training of new personnel, thereby reducing start-up cost.
- (2) Assist in the employment of unemployed, underemployed, and disadvantaged.²

Thus, under the programs' stated concepts, the jobs supported are of such skill levels that the minimum wage, basic skill jobs are "leap-frogged" by the entering labor force and the personnel trained enter the labor force in more remunerative, demanding, and satisfying skill level positions.

The Problem

In view of the stated general objectives, a pertinent question is: How much employment assistance has been provided the unemployed, underemployed, and disadvantaged by this type program? Despite the number of programs in existence, very little documentation of the socio-economic effects or the implementation and maintenance procedures for this type of program is available. Those states with successful programs, although most willing to show them off in general terms, have not published details of their effects or procedures. It was felt that to have published procedures would have provided the competition for indus-

2. "State Funded Worker Training Programs," draft report, Office of Industrial Development, Department of Resources and Economic Development, New Hampshire, July 16, 1973.

trial growth with information about one of the successful state's sharpest competitive tools.

Outline of the Study

This study examines in detail the start-up industry training programs of South Carolina, North Carolina, Virginia, and Alabama. Comparative analyses are made of the accomplishments, operational and support organizations, costs, and the start-up processes of all four states.

During 1963-1973, South Carolina lured \$5.9 billion worth of new or expanding industry into the state in 611 new and 724 expanding industries. The new industries hired 81,930 employees, while the expanding ones added 42,460 to their payrolls. To support this growth, the Division of Industrial Service of the State Board for Technical and Comprehensive Education trained 46,317 South Carolinians.

During 1962-1973, North Carolina officials announced that capital investment in some 6,000 new and expanding industries totaled more than \$6.7 billion and that 318,698 jobs, with a total annual payroll of over \$1.5 billion, had been created. North Carolina's program trained workers for 35.5 percent of those jobs.

Since the inception of Virginia's program in 1966, it has provided training to some 41,000 workers to fill some 100,517 reported new jobs which had been created by new and expanding industries.

During the combined 28 years of operation for all of the states, a total of \$49,671,923 has been recorded as spent. Demand creation costs were \$27,269,885 (54.9 percent) of the total, while training costs were \$22,402,038 (45.1 percent) of the total. The figures show a wide disparity in cost per job created among states. South Carolina's average cost per new job was \$183 and per trainee \$616, while North Carolina's was \$81 per new job and \$229 per trainee.

Then the effects of the programs on industrial relocation trends and the "leap-frogging" of the unemployed and underemployed into the labor force were also examined for North Carolina and South Carolina.

These analyses were done in order to provide recommendations for policy changes and a guide for replication of the programs in a manner which will not only support industrial development, but will also serve as a vehicle for human resource development.

Organization of Report

Chapter I, the introduction, contains the rationale for the study, the statement of the problem, the outline of the study, and the organization of the report.

Chapter II is divided into five sections. Section A provides an overview of the four states' programs. Each of the next four sections contains comparative analyses of those programs; Section B reviews the accomplishments, Section C examines the organizations responsible for the operation of the programs and the programs' support activities; Section D examines costs; and Section E contains the analyses of the start-up industry training processes.

Chapter III contains the analyses of the industrial relocation trends and the socio-economic data for North Carolina and South Carolina which were used to test the hypotheses that: (1) the existence of such programs had caused a change in industry relocation trends, and (2) the relocations have been into the rural areas where there were excess human resources who were then "leap-frogged" into the labor force.

In testing the first hypothesis, an assumption was made that the location of a technical education institution within a county was a prima facie evidence of the presence of a start-up industry training program. In North Carolina, the local educational institutions are responsible for the formulation and conduct of basically on-the-job training programs from their inception. In South Carolina, the basically pre-employment training programs are conducted primarily in the technical education centers. Thus, regardless of the type of program, the technical education institutions are the focal point and an essential element of the industrial development training process.

Factor analysis was the initial statistical tool employed. Next, a series of one-on-one regressions was used. From those regressions, the variables for inclusion in six multiple regression models were chosen. Next came an analysis of variance. Finally, in order to ascertain what portion of the predicted variation was due to unique contributions and what was shared, a commonality analysis program was used.

Using dummy variables for State, region, Standard Metropolitan Statistical Areas, and technical education institutions' locations, regression analyses were run to ascertain whether any or all of those aspects were significant as predictors. For the new jobs variable, none were significant predictors. For new plants, Standard Metropolitan Statistical Areas was significant at the .01 level.

Comparative analyses of the regression analysis results were then made to cluster analyze results obtained using each of the six dependent variables. Then discriminant analysis was employed to see if cluster membership could be predicted by using the original regression predictors as discriminant predictors.

The results of the analysis did not support the first hypothesis that training programs had influenced industrial location. The results continually showed certain variables to be highly associated with opening of new plants and creation of new jobs. These associations boil down to the simple fact that counties which had favorable employment, high education, population, and industrialization continued to have them, while those that did not continued to do without.

Since the data did not support the first hypotheses, the second hypotheses--that the relocation had been into the rural areas where there were excess human resources who were then "leap frogged" into the labor force--became a moot point and was not tested.

Chapter 11

EVALUATION OF THE SELECTED START-UP INDUSTRY TRAINING PROGRAMS

Overview

An overview of the programs of the four states studied is provided in this section to serve as a guide for the reader and to facilitate the detailed comparisons which are contained in the next four sections.

Table II-1 displays the cogent features of the four states' populations, efforts, accomplishments, program support and mode of administration and processes.

Census data for 1960 and 1970 shows an increase in percentage of the labor force and percentage of the manufacturing labor force respectively for the states as follows: South Carolina, 19.5 and 34.1; North Carolina, 24.0 and 38.3; Virginia, 27.7 and 28.0; and Alabama, 12.0 and 20.7. The demand creation and training agencies, for the periods during the decade they were in operation, reported the new jobs created and trainee completions as a percent of the change in the manufacturing labor force to be respectively for each state as follows: South Carolina, 163.3 and 31.3; North Carolina, 99.6 and 39.6; and Virginia 57.7 and 18.5. North Carolina's new job and trainee reported figures appear to be the most consistent with the other data. Alabama's program did not commence until the 1970's.

During the combined years of operation for all of the states a total of \$49,671,923 has been recorded as spent, with 55.6 percent of that spent on demand creation and 44.4 percent on training. The total shows that North Carolina, with an average cost for each new job created of \$81 and each trainee of \$229 and, for the last six years, an average annual cost of \$2,137,810 is

Table II-1
Overview Comparison Table

	<u>South Carolina</u>	<u>North Carolina</u>	<u>Virginia</u>	<u>Alabama</u>
I. Accomplishments				
a. Labor Force 1960-1970				
Total 1960 ¹	896,246	1,754,362	1,532,599	1,152,736
Total 1970 ²	1,071,249	2,176,073	1,956,894	1,292,346
Change	+175,003 (19.5)	+421,711 (24.0)	+424,000 (27.7)	+139,610 (12.1)
Civilian 1960 ¹	838,301	1,680,442	1,399,517	1,129,975
Civilian 1970 ²	1,002,547	2,071,059	1,781,265	1,259,056
Change	+164,246	+390,617	+381,748	129,081
Manufacturing 1960 ¹	257,503	509,193	299,935	282,992
Manufacturing 1970 ²	345,423	704,306	384,222	341,575
Change	+87,920 (34.1)	+195,113 (38.3)	+84,287 (28)	58,583 (20.7)
Development Agencies	FY 62-69	FY 63-69	FY 66-69	
New Jobs Reported	143,632	194,275	48,600	No Program
% Manufacturing Change	163.3	99.6	57.7	In 1960's
Trainees Reported	27,522	77,420	15,581	
% Manufacturing Change	31.3	39.6	18.5	
b. Industrial Development				
New Jobs	FY 62-73	FY 62-73	FY 65-72	FY 72-73
	195,545	318,698	100,517	63,799
Trainees	46,317	113,246	41,000	4,904
% New Jobs	23.7	35.5	40.7	7.7

Table II-1 (continued)

	<u>South Carolina</u>	<u>North Carolina</u>	<u>Virginia</u>	<u>Alabama</u>
II. Costs	<u>Twelve Years</u>	<u>Six Years</u>	<u>Nine Years</u>	<u>Two Years</u>
Development Agency	\$11,884,575 (49.1)	\$ 7,392,031 (57.6)	\$ 7,168,871 (60.1)	\$ 860,502 (45.0)
Training Agency	11,535,051 (50.9)	5,434,831 (42.4)	4,346,062 (39.9)	1,050,000 (55.0)
Total	23,419,626	12,826,862	11,514,933	1,910,502
Average Cost				
Annual FY 68-73	\$ 2,081,512	\$ 2,137,810	\$ 1,577,783	\$ 955,251
New Jobs to FY 73	183	81	111	29
Trainees	616	229	258	390
III. Geographical				
Population 1970	2,590,516	5,082,059	4,648,000	3,444,165
Area (Square miles)	31,055	52,566	42,627	50,708
Counties/Independent cities	46	100	96,123	67
SESA's	4	7	7	6
IV. Organizations				
A. Staff (1973)				
Director	1	1	1	1
Professionals				
Central Office	8	4	4	5
Area	13	-	2	4
Support Personnel				
Special	15	-	2	
Administrative	2	1	3	4
Total	39	6	12	14
B. Institutions				
Centers	17	56	23	27
Campuses	-	-	29	-

Table II-1. (continued)

	<u>South Carolina</u>	<u>North Carolina</u>	<u>Virginia</u>	<u>Alabama</u>
V. Program Support How shown	Visible top level Knowledge	Visible top level Governor's award	Adequate	Visible top level Appropriations
VI. Program Administration Demand creation Training	Centralized Centralized	Decentralized Decentralized	Centralized semi-centralized	Centralized Semi-centralized
VII. The Process				
a. Demand creation	Centralized	Decentralized	Centralized	Centralized
b. Labor force analysis				
1. Job analysis	Basic	Basic	More advanced	Basic
2. Manpower required	Simplistic	Simplistic	More advanced	Simplistic
3. Labor force availability	Internal source	Employment service	Employment service	Employment service
4. Wage and salary data	Internal source	Employment service	Employment service	Employment service
c. Master plan	Basic	Basic	Basic	Basic
d. Lead time scheduling	Basic	Basic	Basic	Basic
e. Orientation	Community selected	Low priority	Low priority	Work force attitudes
f. Trainee preparation				
1. Curriculum	Systems approach	Systems approach	Systems approach	Systems approach
2. Lesson plan	Systems approach	Systems approach	Systems approach	Systems approach
3. Training aids	Systems approach	Systems approach	Systems approach	Systems approach
4. Text	Systems approach	Systems approach	Systems approach	Systems approach
5. Site	TEC center	Industry site	Industry site	Industry site
	Community	Community	Community college	Community
6. Instructors	Industry personnel	Industry personnel	Industry personnel	Industry personnel
g. Recruitment and Testing	Industry	Industry	Industry and Employment Service	Industry
h. Selection Policy	Industry Upgrade-cream	Industry Upgrade-cream	Industry Upgrade-cream	Industry Upgrade-cream

Table II-1 (continued)

	<u>South Carolina</u>	<u>North Carolina</u>	<u>Virginia</u>	<u>Alabama</u>
i. Skill development				
1. Dominant type	Pre-employment	On-the-job	On-the-job	On-the-job
2. When conducted	Evenings	On-the-job	On-the-job	On-the-job
3. Where conducted	TEC centers	On-the-job	On-the-job	On-the-job
4. Trainee pay	No	On-the-job-industry	On-the-job-industry	On-the-job-industry
5. Cost to trainee	Time	None	None	None
6. Benefit to trainee	Job	Job	Job	Job
7. Cost to industry	None	None	None	None
j. Job placement	As industry needs	Already done	Already done	Already done

Source: 1. U.S. Census state volumes, 1960.
2. U.S. Census state volumes, 1970.

apparently the most cost efficient; while South Carolina, with an average cost for each new job created of \$183 and each trainee of \$616, and for the same period an average annual cost of \$2,590,516, is the least cost efficient.

The geographical data is displayed for illustrative purposes only.

The organizations vary markedly, with South Carolina capable of providing professional assistance on more than a one on one, professional to institution basis, and with North Carolina having only one professional for each 16 institutions.

The top level support for the program varies from state to state; South Carolina's is manifested in the detailed knowledge of the program by top level officials and money from the legislature; North Carolina's is manifested in the "Governor's Award" program; and Alabama's in Governor Wallace's providing more than the requested funds to support the program.

The greatest contrast in mode of administration of the programs is South Carolina's highly centralized demand creation and training efforts and North Carolina's regionally decentralized demand creation and institutionally decentralized training efforts.

Virginia, with its occasional task analysis program, provides more advanced job analysis and manpower requirement efforts than the other states; South Carolina, with its internal capacity for labor force availability and wage and salary surveys, has the advantage over the other states.

South Carolina's orientation is a public relations sell to relocating personnel, while Alabama's is a management orientation on the mores and customs of the local labor force.

A systems approach to training is utilized by all four states in curriculum, lesson plan, training and textbook preparation. South Carolina, with its emphasis on pre-employment training, now conducts most of it in the TEC centers, the others in the industrial site. All states pay the instructors, who preferably are industry

personnel. North Carolina, Virginia, and Alabama place greater emphasis on instructor training than does South Carolina.

Recruitment, testing, and selection are industry dominated. In Virginia, the employment service is utilized more than in the other states. In all of the states, the selection policy is admittedly one of upgrading or "creaming" from the currently "under-employed" labor force.

While South Carolina's training is primarily pre-employment, the other states emphasize on-the-job training programs and the placement of individuals in paying positions upon selection for the job.

Accomplishments

South Carolina

In 1963, the West Committee, a Joint Senate-House Committee of the South Carolina General Assembly, reported to that Assembly the results of its "Study into the Needs of the State Development Board on the Subject of Vocational Training."¹ The study's results demonstrated that the South Carolina authorities recognized that they had a problem. They defined that problem -- the need for an industrial development training program -- and proposed a solution. They then organized to implement the solution and vigorously pursued the planned program.

Wade Martin, who at that time was with the highly successful North Carolina Program, was hired as Executive Director. Recognizing the challenge and the opportunity afforded by South Carolina's program, Martin became the driving force behind what

1. "1961 Report of Committee Studying Needs of the State Development Board on the Subject of Vocational Training," South Carolina General Assembly, 1961.

was to become a highly centralized and authoritarian program. Even today, several years after his death, Martin's entrepreneurial drive, motivation, spirit, and leadership abilities are cited as the catalyst around which the committee's staff and program grew. In discussing the program's success, Bonner Manly (co-worker of Martin from the program's inception), stated "the secret is in the people who run the program -- the esprit de corps among them."

Though the people who run the program are certainly essential, equally essential is the backing of the Executive and Legislative branches of Government. From its inception, the program has had top level backing; three of the state's last four governors were active in its implementation, i.e., the study was instigated by Governor Fritz Hollings; the committee was chaired by Governor John C. West, then a Senator; and the vice-chairman was Robert E. McNair, West's predecessor as Governor and then a Representative. Throughout the years since 1961 they have continued to provide enthusiastic interest and support by words and actions, thus providing the foundation upon which to build an exemplary program.² The military axiom of "if the brass on top don't shine -- the brass underneath can't" is particularly appropriate here. The brass at the very top has consistently shone on this program, and thus the program has shone brightly from its very inception.³

2. Personal interview with J. Bonner Manly, former Director, South Carolina State Development Board; Columbia, South Carolina (September 10, 1973).

3. Personal interview with Woody Brooks, Director of Local Affairs Office, Governor's Office, State of South Carolina; Columbia, South Carolina (September 10, 1973) and personal interview with Earle E. Morris, Lieutenant Governor, State of South Carolina; Columbia, South Carolina (September 10, 1973).

The New York Times⁴ recently cited South Carolina as a "textbook example of how a Southern state successfully lures industry from other regions of the United States and, in recent years, from around the world."

The Wall Street Journal⁵ also reported:

Six years ago the Atlantic Seaboard State (South Carolina) hosted only 11 foreign-owned factories, representing \$432 million in capital investment. Today, says a U.S. Commerce Department official, 50 such plants, worth \$1.1 billion, are operating or abuilding in the state. This puts South Carolina ahead of such populous states as Pennsylvania (49 factories), California (43) and Illinois (42).

To earn this type of recognition, South Carolina has lured \$5.9 billion worth of new or expanding industry into the state during the fiscal years 1963-1973. The State Development Board reports that there were 611 new and 724 expanding industries during that period. The new industries hired 81,930 employees, while the expanding ones added 42,460 to their payrolls. Thus, a total of 124,399 positions in 1,335 new and/or expanding industries* were created.

4. Roy Reed, "Salesmanship by South Carolina Wins Foreign and U.S. Investors," The New York Times, July 24, 1973, p. 1, second section.

5. Jim Montgomery, "South Carolina Lures Foreign Investors with Salesmanship, Hospitality, Free Job Training and Luck," The Wall Street Journal, Dallas edition, November 6, 1973, p. 1.

*Some of the firms are counted more than once since they were both new and expanding firms during this same period.

The South Carolina Industrial Directory 1973-74⁶ figures do not include jobs created between 1963-1973 for firms that were no longer in business in the state in 1973 when the directory was compiled, such as Avoc-Lycoming of Charleston, which recruited, trained, and hired over 3,000 employees at the height of the Viet Nam War. Other figures obtained from the Development Board indicate that there were as many as 195,545 jobs created during the period, while others show that for fiscal years 1964-1973, there were 145,545 new jobs created. The actual figure is not crucial, the crucial point is that the Division of Industrial Service (DIS) of the State Board for Technical and Comprehensive Education (TEC) trained 46,317⁷ South Carolinians for jobs in the new and/or expanding industries in the Start-Up Industry Training Program, also known as Special Schools. Depending upon the figures used for job creation, somewhere between 23 and 33 percent of the new job labor force was trained to meet specific demands of new and/or expanding industry.

Table II-2 depicts the annual figures for capital investment, new jobs reported as created, number of trainees, and percent of trainees to new jobs. As shown, the percent of trainees to new jobs ranged from a low of 2.6 percent in the first year of the program to 51 percent in 1967, averaging 23.6 percent for the 12-year period and 35.3 percent for the last eight years.

Table II-3 breaks the new jobs down by categories and depicts the number and percent of annual totals within each category. For the period 1964-1973, Textile and Apparel accounted for 37.2 percent of the new jobs, Metalworking 29.5 percent, Chemical 16.7

6. South Carolina State Development Board, Industrial Directory of South Carolina 1973-1974, General Report, Columbia, South Carolina.

7. State Board for Technical and Comprehensive Education, unpublished Annual Reports, Columbia, South Carolina.

Table II-2
South Carolina Accomplishments

	Capital Investment \$000	New Jobs	Trainees	Percent <u>Trainees</u> Jobs
1962	\$210,795	18,483	475	2.6
1963	264,208	14,854	2,190	14.7
1964	287,214	13,959	2,785	20.0
1965	600,006	26,447	2,824	10.6
1966	509,012	18,724	5,044	26.9
1967	305,797	11,176	5,704	51.0
1968	635,617	19,771	4,081	20.6
1969	706,289	20,218	4,418	21.9
1970	319,456	10,530	4,534	43.1
1971	473,391	12,272	3,804	31.0
1972	502,563	13,449	5,403	40.2
1973	1,229,690	15,662	5,054	32.3
Total	5,944,038	195,545	46,317	23.6*

* Percentage of Trainees to New Jobs 1962-1973.

Table II-3

Breakdown of Jobs Created FY 1962-73
South Carolina

FY	Total Number of New Jobs*	Textile and Apparel		Metalworking		Chemical		Miscellaneous	
		Number	As A Percent of Total	Number	As a Percent of Total	Number	As A Percent of Total	Number	As A Percent of Total
1962	18,483	-----	-----	Data Not Available		-----	-----	-----	-----
1963	14,854	-----	-----	Data Not Available		-----	-----	-----	-----
1964	13,959	6,210	38.9%	4,929	30.8%	990	6.2%	1,830	11.5%
1965	26,445	10,000	37.8%	4,640	17.5%	6,911	26.1%	4,894	18.5%
1966	18,724	6,630	35.4%	5,632	30.7%	2,971	15.9%	3,491	18.6%
1967	11,176	2,803	25.1%	4,321	39.1%	1,815	16.2%	2,237	20.0%
1968	19,771	7,021	35.5%	7,160	36.2%	3,445	17.4%	2,145	10.8%
1969	20,218	7,543	37.3%	5,771	28.4%	3,540	17.5%	3,364	16.6%
1970	10,530	3,824	36.3%	3,445	32.7%	1,654	15.7%	1,607	15.2%
1971	12,272	6,441	52.5%	3,092	25.1%	1,535	12.5%	1,204	9.8%
1972	13,459	5,230	38.8%	4,597	33.9%	1,088	8.1%	2,544	18.9%
1973	15,662	4,680	29.9%	4,083	27.3%	3,124	19.9%	3,575	22.8%
Sub-Total (1964-73)	162,216	60,382	37.2% **	47,870	29.5% **	27,073	16.7% **	26,891	16.6% **
TOTAL (1962-73)	195,553								

*New jobs announced during fiscal year. Jobs not necessarily created during that year.

**Percentages for 1964-1973.

Source: Compiled from office files of the South Carolina State Development Board.

percent and Miscellaneous 16.6 percent, thus providing general industrial growth topped by the expected Textile and Apparel category.

Table II-4 depicts a breakdown of new jobs, total trainees, number of trainees by category, mode of training, and sex of trainee for fiscal year 1972 and fiscal year 1973. These figures are representative of recent years' experience.⁸

North Carolina

The North Carolina industrial development program, with its attendant new industry training program, had its genesis in the late 1950's and was one of the forerunners of the other programs in the Southeast.⁹

During the period 1962-1973, North Carolina officials announced that capital investment in some 6,000 new and expanding industries totaled more than \$6.7 billion and that 318,698 jobs, with a total annual payroll of over \$1.5 billion, has been created. North Carolina's program trained workers for 35.5 percent of those jobs with the annual percent trained ranging from a low of 30.9 in 1969 to a high of 43.9 percent in 1967 (Table II-5).

8. Personal interview with John E. Riley, Director, Division of Industrial Services, State Board for Technical and Comprehensive Education, Columbia, South Carolina (September 11, 1973).

9. Personal interview with Joe E. Sturdivant, Director, Industrial Service Division, Department of Community Colleges, Raleigh, North Carolina (October 1, 1973).

Table II-4
Training by Categories FY 72-73
South Carolina

	<u>FY 72</u>	<u>FY 73</u>
Total New Jobs	13,449	15,662
Total Trainees	5,403	5,054
Trainees by Category		
Textile and Apparel	2,992	1,195
Metalworking	1,055	2,290
Electrical	915	875
Chemical	18	22
Miscellaneous	423	672
Training Mode		
On-the-job	2 538	1,539
Pre-employment	2,865	3,515
Sex of Trainee		
Male	1,690	1,727
Female	3,713	3,327

Table II- 5

North Carolina Accomplishments 1962-1973

	<u>Capital Investment</u> <u>(\$000)</u>	<u>New</u> <u>Jobs</u>	<u>Trainees</u> <u>by FY</u>	<u>Percent</u>	<u>Trainees</u> <u>Jobs</u>	<u>New</u> <u>Pay Roll (000)</u>
1962	\$ 229,562	24,700	FY NA			\$ 79,385
1963	387,929	31,065	64 11,120	35.5		106,131
1964	398,983	29,576	65 10,727	36.3		105,223
1965	482,430	37,042	66 11,641	31.4		136,951
1966	613,581	37,454	67 12,322	32.9		141,812
1967	661,957	24,774	68 10,868	43.9		108,733
1968	574,840	31,297	69 11,147	35.6		153,271
1969	682,562	31,067	70 9,595	30.9		154,159
1970	631,954	22,586	71 9,385	43.6		114,108
1971	702,250	25,433	72 9,603	37.8		136,713
1972	645,694	26,232	73 9,334	35.6		151,304
1973	727,091	22,172	74 7,034	31.7		134,980
Total	6,737,833	318,698	113,246	35.5		1,523,770

In fiscal year 1973, a representative year,¹⁰ 43 of the state's 56 Community Colleges/Technical Institutions participated in 115 training programs, covering 15 two-digit SIC's, for 9,334 trainees. Table II-6 provides a breakdown of kinds of trainees by SIC with the percentage of trainees in each SIC.

Virginia

The Special Training Division of the Virginia Community College System was established at the same time the system was created in fiscal year 1966.¹¹

Since the Division's inception it has provided training to some 41,000 workers to fill some 100,517 reported* new jobs which had been created by new and expanding industries. No annual breakdown

10. Personal interview with John Wiles, Industrial Engineer, Industrial Service Division, Department of Community Colleges, Raleigh, North Carolina (May 17, 1974).

11. Personal interview with Preston Wilhelm, Training Coordinator, Special Training Division, Virginia Community College System, Richmond, Virginia (October 4, 1973).

*The Division of Industrial Development makes this disclaimer about its figures:

No claim is made that this list includes all new manufacturing enterprises in Virginia. It merely lists those that have come to the attention of this Division.

Thus, with the probable under reporting of new jobs and exact counting of trainees, it is highly doubtful that trainees have been provided for 40.8 percent of the new jobs.

Table II-6

North Carolina FY 73 Trainees by SIC

Number of Participating Institutions: 43
 Number of Courses: 115
 Number of Two Digit SIC: 15
 Total Trainees: 9,334

<u>SIC</u>	<u>Name</u>	<u>Trainees</u>	<u>Percent of Trainees</u>
22	Textile mill products	5,408	57.9
23	Apparel and other textile products		
24	Lumber and wood products	330	3.5
25	Furniture and fixtures	414	4.4
26	Paper and allied products	230	2.5
28	Chemical and allied products	467	5.0
30	Rubber and plastics products, N.E.C.	62	.7
31	Leather and leather products	6	.06
32	Stone, clay and glass products	468	5.0
34	Fabricated metal products	664	7.1
35	Machinery, except electrical	296	3.2
36	Electrical equipment and supplies	896	9.6
37	Transportation equipment	46	.5
38	Instruments and related products	33	.4
39	Miscellaneous manufacturing industries	14	.15
		<u>9,334</u>	<u>100.00</u>

SOURCE: New Industry Training Program, Enrollments Expenditures, July 1, 1972-June 30, 1973 Report.

of trainees is available until fiscal year 1971, however, since that time 25,409 workers have been trained, leaving a balance for the prior years of 15,581. Table II-7 depicts the breakdown of reported new jobs, trainees, and the percent of trainees to new jobs.

Alabama

The Alabama Industrial Development (AID) Training Program was established and formally funded in June of 1971. It was conceptually modeled after South Carolina's program, but modified to conform to Alabama's existing educational/training system and capabilities.

AID's is charged with providing trained, competent workers for new and expanding manufacturing firms throughout the state in cooperation with the Alabama Development Office (ADO) and the state's educational system.¹²

Since AID's inception, ADO has announced the creation of 106,796 jobs in 2,001 new and expanding industry plants whose capital investment totals more than \$2.8 billion (Table II-8).

However, there is evidence to indicate that for 1973, at least, the Alabama Development Office has engaged in a bit of puffery in the area of "industrial expansion." For example, Jefferson County (Birmingham), the county with the greatest amount of "expansion" and representative type, reported by name, type of business, number of new jobs and amount of capital investment (C.I.), 32 new plants and 196 expanding businesses. Among the expansions were -- Commercial Printing, two new jobs, \$10,500 C.I.; Commercial Printing, one new job, \$10,000 C.I.; Metal Fabrication, one new job, \$5,000 C.I., etc.

12. Personal interview with Jim Vaught, Industrial Consultant, Alabama Industrial Development Training Program, Montgomery, Alabama, May 17, 1974.

Table II-7
Virginia Accomplishments 1966-1973

	<u>New Jobs*</u>	<u>Trainees**</u>	<u>Percent</u>	<u>Trainee New Jobs</u>	
1966	17,500				
1967	6,000				
1968	16,700	15,581	32.05		} Cumulative
1969	8,400				
1970	3,349	3,824	114.2		
1971	14,120	5,730	40.6		
1972	15,150	7,586	50.1		
1973	19,298	8,279	45.2		
Total	100,517	41,000	40.8		

SOURCE: *Virginia Division of Industrial Development.

**Virginia Department of Community Colleges.

Table II-8
Alabama Accomplishments 1972 - 1974

	Capital Investment (000) *	New Jobs *	Trainees **	<u>Trainees</u> Percent New Jobs
1972	363,567	20,920	1,816	8.6
1973	838,290	42,878	3,088	7.2
1974 *	1,652,725	42,998	2,722	6.3
Total	2,854,582	106,796	7,626	7.1

SOURCE: *Alabama Development Office.

**Alabama Industrial Development Training Program Office.

*Figure provided prior to completion of the year, thus they are not total figures for year.

In total, 45 of the expansions involved less than seven new jobs; 58 firms provided confidential data on the number of new jobs; and 56 of the 196 firms/industries were going to spend less than \$50,000 in capital investment.¹³

There is no question that there was expansion by each of the firms listed, but the minimal distinction between expanding business services and manufacturing industries makes it extremely difficult to compare the real accomplishments of AID with those of similar organizations in other states. This is vividly illustrated in the figure in Tables II-1 and II-9.

Organizations

South Carolina

The State Board of Technical and Comprehensive Education is organized for budgetary purposes into five units -- Administration, Program Services, Technical Education Centers, Regional Technical and Manpower Centers and the Industrial Services Division (DIS).

DIS, the division responsible for conducting the start-up industry training program, is a highly centralized and authoritarian division which is functionally organized as shown in Appendix 2.

Twenty-six of the Division's personnel are centered in the Columbia area. The remaining 13, all of whom are Industrial Service Representatives, are dispersed throughout the state at the various Technical Education Centers.¹⁴

13. New and Expanding Industries Report for 1973, Alabama Development Office, Office of the Governor, Montgomery, Alabama, undated.

14. Personal interview with John E. Riley, op. cit., and personal interview with Henry W. Warth, Industrial Training Consultant, Division of Industrial Services, Columbia, South Carolina (September 10, 1973).

Table II-9
ADO Reports Vis-A-Vis AID Reports

	<u>ADO*</u>	<u>AID**</u>	<u>AID Reports</u> <u>Percent ADO Reports</u>
New Jobs	106,796	7,626 Trainees	7.1
Plants (New and expanding)	2,001	113 Courses	5.6
Capital Investment	2,854 billion	.648 billion	

SOURCE: *Alabama Development Office Report.

**Alabama Industrial Development Training Office Report.

One of the key supportive features of the South Carolina program is the internal and integrated capability for Industry Wage and Practices Surveys and Labor Force Availability Surveys. A statistician located in the Planning and Research Division has a dual responsibility to both that division and DIS for the collection and compilation of the data used in those surveys.¹⁵

The April, 1973, Industry Wage and Practice Survey provided data furnished by South Carolina employees in the following industries:

- Apparel
- Brick, Concrete, and Stone Products
- Chemical
- Electrical Machinery and Equipment
- Food Processing
- Furniture Products
- Metalworking
- Paper and Allied Products
- Synthetic Fiber Production
- Textiles

Wage data reported in this survey are hourly rates, including incentive earnings for piece work and production bonus systems, paid to over 90,000 experienced workers employed in over 300 job classifications. The information reported represents wage data as of January 31, 1973. Trainee rates, premium pay for overtime, holidays, and shifts are excluded.¹⁶

15. Personal interview with N. L. Ball, Statistician, Division of Planning and Research TEC, South Carolina (September 14, 1973).

16. State Board for Technical and Comprehensive Education, Industry Wages and Practices Survey, South Carolina, Columbia, South Carolina: State Board for Technical and Comprehensive Education, April, 1973, p. 1.

The wage data is broken down by industry, for 12 years within the state, as well as containing the state-wide data of general practices and definitions of job titles for both shops and offices.

In addition to the wage survey, the Special Survey of Labor Force Availability studies are conducted on an as requested basis. The resultant reports depict population data by age, sex, marital status, length of residence, distance of residence from proposed plant site, education, training, employment status, distance currently traveled to work, manufacturing experience, and willingness to do shift work. The cost of a survey and report is estimated to be about \$5,000.¹⁷

The Industry Wage and Practices Survey reports and the Labor Force Availability Survey are used as tools in selling South Carolina's labor force to industry. These are considered a definite necessity.¹⁸ The support provided DIS by these surveys is an integral part of the selling and planning process of the Special Schools. The control provided by the location of these capabilities within TEC versus within the Employment Service, where it could be argued they belong, is optimal.

The South Carolina State Development Board, the principal demand creation agency* of the state, views itself as "an economic catalyst, ...to assist the action between prospect and community...

17. Personal interview with N. L. Ball, op. cit.

18. Harper, Cotton, and Little, Inc., Texas Industrial Start-Up Training, Final Report, Austin, Texas: Harper, Cotton, and Little, Inc., 1974, p. vi-9.

*An entity whose actions create a labor force demand situation in new jobs by its industrial development activities.

salesmen to bring them to the desired reaction: capital investment."¹⁹ As such, the Board and its associates, including DIS, are acutely attuned to today's marketing concept of the determination of the consumer's needs, an integrated marketing effort directed to fulfilling those needs, and the provision of long-term customer satisfaction.²⁰ For this reason "whatever else the industrial representative may be -- engineer, financial expert or manpower analyst -- he is first a salesman."²¹ The industrial representative/salesman (generally industry's first contact in the state) is responsible for determining just exactly what industry needs are in terms of land, water, power, transportation, manpower, and a multitude of other factors. Once the needs are determined, the representative prepares a sales presentation for that specific industry/firm, using both the internal (Development Board) and external (such as DIS) resources. This presentation demonstrates how South Carolina can best satisfy the stated needs. All of the expertise available to the Development Board is marshalled for this presentation and any subsequent presentations that may be required in order to close the industrial relocation sale.

The Director of DIS is one of the sales team members and, as such, makes himself available to the Development Board on a priority basis. A summons by the Development Board for a prospect briefing takes precedence over all other business in the State Board

19. "The South Carolina State Development Board," information pamphlet prepared by the State Development Board, (undated), p. 1.

20. Phillip Kotler, Marketing Management -- Analysis, Planning and Control, Englewood Cliffs, New Jersey: Prentice-Hall, Inc. (1972).

21. State Development Board pamphlet. op. cit., p. 2.

of Technical and Comprehensive Education. This is a recognized and accepted fact and is never subject to challenge.²²

The members of the Development Board, the Director of DIS, and all of the industrial representatives are manifestations of South Carolina's determination to serve industry in any way necessary to assure the relocation of desirable industry.

In South Carolina, there is no question that the State Development Board and its supporting agencies will respond when a desirable industry calls. The pervasive attitude throughout the interviews conducted was one of dedication and determination in ascertaining industry's needs and satisfying them.²³

In view of the supportive role of the Technical Education Centers (TEC centers) and their geographical dispersion throughout the state, a brief examination of South Carolina's geography is highly germane.

South Carolina's total area is 31,055 square miles, its extreme length (north to south) is 215 miles, and its extreme width (east to west) is 285 miles. the geographic center is 13 miles southeast of its capital, Columbia. Its population was ranked 26th in the nation in 1970, with 2,590, 516 citizens,²⁴ and it contains four SMSA's -- Columbia, Charleston, Greenville-Spartanburg, and the Aiken County portion of the Augusta, Georgia SMSA.

In this relatively small state, during September of 1973, there were 17 Technical Education/Regional Manpower Centers (TEC

22. Personal interview with John E. Riley, op. cit.

23. Ibid.; also, personal interview with J. Bonner Manly, op. cit.; personal interview with Woody Brooks, op. cit.; and personal interview with Earle E. Morris, op. cit.

24. Rand McNally, Standard Reference Map and Guide of South Carolina, Chicago: Rand McNally (1972).

centers). These centers are so located that 90 percent of the population and 80 percent of the land area are within a 30-mile radius of at least one of the centers.²⁵ The center most distant from Columbia is 126 miles away. The centers are located in 17 of the state's 46 counties; a total of 25 counties either have centers or co-sponsor one; and every county except one is contiguous to a county which has either a center or co-sponsors one.

During the early stages of the program much of the training was conducted in temporary training structures. However, as the TEC centers system grew, more and more of the training was moved into the centers, until now approximately 90 percent of it is center conducted.²⁶

TEC center personnel are utilized in the conduct of the training when appropriate and DIS's Industrial Services Representatives are located in 11 of the centers. For these reasons, the centers have become a training focal point for the new and/or expanding industries.²⁷ However, since Special Schools can be and are conducted outside of the centers, the centers cannot be termed an absolute necessity; rather they are valuable facilitators of the training.

More importantly, they are an outward manifestation of the community's desire for an upgrading of its labor force and industrial

25. South Carolina Commission on Higher Education, and the State Committee for Technical Education, Two-Year Post Secondary Education in South Carolina, Columbia, South Carolina: South Carolina Commission for Technical Education (1971), p.4.

26. Personal interview with Henry W. Warth, op. cit.

27. Personal interview with Walt Delany, Executive Assistant to the Executive Director, State Board for Technical and Comprehensive Education, Columbia, South Carolina (September 14, 1973).

growth. As will be shown, no expansion takes place in a community until the community desires it. One of the methods of demonstrating that desire is community support for the establishment of a Technical Education Center. Of the 17 centers established in 1973, 13 were grass-roots sponsored, and all of those can be termed highly successful; four were converted Regional Manpower Centers or vocational/trade schools and have had limited success.

The centers are important not only as training sites, but also as indicators of the community's desire for training and upgrading of the labor force and for industrial growth. This indication is evidenced by the community's willingness to fund, with federal assistance, the campus of the center. For though the state provides the equipment and pays the personnel and overhead, it makes no investment in land, bricks, or mortar.²⁸

North Carolina

The Industrial Service Division (ISD), Department of Community Colleges, North Carolina State Board of Education, is staffed by a director, four training specialists, and a secretary.²⁹

These five professionals provide support to the Commerce and Industry Division (CID), Department of Natural and Economic Resources in selling North Carolina to industrial relocation prospects and in providing technical assistance to the state's community colleges/technical institutions in the conduct of the start-up training program.³⁰

With its limited staff, North Carolina's program is, of necessity, highly decentralized. The initial contact with prospects

28. Personal interview with Woody Brooks, op. cit.

29. Personal interview with John Wiles, op. cit.

30. Personal interview with Joe E. Sturdivant, op. cit.

is made at the state level in most cases. Execution of the program is primarily a local responsibility with limited technical assistance from the state office once a program is underway.³¹

The Commerce and Industry Division also emphasizes local responsibility. It has established five regional offices in the state to assist local communities in the attraction of industry, and it sponsors the Governor's Award Program, which will be discussed below in the section on Demand Creation.³²

Labor force availability data and wage and salary information are the responsibility of the employment service and the local communities in North Carolina.³³

In North Carolina, even more than in South Carolina, the community colleges/technical institutions are the keys to the state's new industry training program, so that an examination of North Carolina's geography and of the institutions' geographical dispersion is highly germane.

North Carolina's total area is 52,566 square miles; its extreme length (north to south) is 248 miles, and its extreme width (east to west) is 640 miles; the geographic center is 112 miles southwest of its capital, Raleigh. Its population ranked 12th in the nation in 1970, with 5,082,059 citizens; and it contains seven SMSA's -- Ashville, Charlotte, Greensboro-Winston Salem-High Point, Durham, Raleigh, Fayetteville, and Wilmington.³⁴

31. Personal interview with Howard Boudreau, President, Fayetteville Technical Education Center, Fayetteville, North Carolina (October 2, 1973).

32. "North Carolina Governor's Award Program," Commerce and Industry Division, Department of Natural and Economic Resources, Raleigh, North Carolina (undated press release), p. 1.

33. Personal interview with John Wiles, op. cit.

34. Rand McNally, Standard Reference Map and Guide of North Carolina, Chicago: Rand McNally (1972).

In September of 1973, there were 56 community colleges/technical institutions in North Carolina. These institutions were located one to a county, and each county not having an institution was contiguous to one or more counties in which an institution was located, except Currituck, Tyrell, Dare, and Hyde counties in the coastal area. Additionally, they are so located that only small portions of Swain, Madison, Watagua, and Ash counties in the mountains; Union County in the Piedmont; and Brunswick County in the coastal area are more than 30 miles distant from an institution, except again, the counties of Tyrell, Dare, and a large portion of Washington County in the coastal area.

The personnel of the various institutions act as training coordinators in North Carolina's on-the-job training oriented start-up program. So although the institutions are the focal point for coordination, the training itself is largely conducted on site.³⁵

Virginia

The Special Training Division (STD), Virginia Community College System, Richmond, Virginia, is staffed by a director, four training coordinators, two audio-visual specialists, and three secretaries. Additionally, one permanent instructor is located in each of the cities of Roanoke, Waynesboro, and Norfolk.³⁶

The five central office professionals support the Governor's Office Division of Industrial Development in selling Virginia to industrial relocation prospects, both in the United States and abroad. They also provide technical assistance to the local community colleges conducting start-up programs. At any given time, each of the

35. Personal interview with Howard Boudreau, op. cit.

36. Personal interview with Preston Wilhelm, op. cit.

training coordinators will be involved in about 15 training programs, and this is considered a normal work load.³⁷

Thus, as is North Carolina's case, the limited STD staff necessitates a highly decentralized program. The initial prospect contact may be made at the state level where the professional planning is done, but execution of the training program itself is primarily a local responsibility of one of the 23 community colleges of the system.

Wage and salary data are obtained from the Virginia employment service.

Since the 23 community colleges are so vital to the state's program, an examination of the state's geography and the location of the colleges is pertinent.

Virginia's total area is 42,627 square miles; its extreme length (north to south) is 212 miles, and its extreme width (east to west) is 440 miles; its geographic center is 100 miles west of the capital, Richmond. Its population ranked 14th in the nation in 1970, with 4,648,000 citizens, and it contains seven SMSA's — Roanoke, Petersburg-Colonial Heights, Richmond, Newport News-Hampton, Norfolk-Portsmouth, Lynchburg, and the Virginia portion of the Washington, D. C. SMSA.³⁸

In September, 1973, there were 29 campuses in the 23 community college system. These campuses/colleges were located in 23 of Virginia's 38 independent cities and 96 counties. They are so

37. Personal interview with Preston Wilhelm, op. cit.

38. Rand McNally, Standard Reference Map and Guide of Virginia, Chicago: Rand McNally (1972).

located that portions of every county in the state are within a 30-mile radius of a campus. However, there are portions of 21 counties which are not within that 30-mile radius. These counties are Lee, Dickerson, and Carr in the mountains; Patrick, Halifax, and Mecklenberg along the North Carolina state line; Shenandoah, Rockingham, Rockbridge, and Page in the Shenandoah Valley; and Rappahannock, Madison, Culpepper, Orange, Louisa, Gooch, Cumberland, Powhattan, Buckingham, Amelia, and Nelson in the central section of the state.³⁹

Alabama

The Alabama Industrial Development Training Program (AID), Division of Vocational Education and Community Colleges, State Department of Education, is funded as a line item in the budget of John M. Patterson Vocational-Technical School, Montgomery.⁴⁰

George Howard, AID Program Director, came to Alabama to implement this program after a career with Lockheed and service as program director of similar programs in North Carolina and Florida.⁴¹ One of the consequences of Howard's North Carolina experience is that, although Alabama authorities claim that theirs is a modification of South Carolina's program, it more closely resembles the decentralized and institution-oriented program of North Carolina.

39. Virginia Community College System, "Our System Will Train the Workers You Need in Virginia," undated pamphlet.

40. Personal interview with Jim Vaught, op. cit.

41. Ibid.

AID's organization, Appendix 3, consists of four functional areas/units. The program director and the school coordination, publicity, sales, and management/supervisor training positions are members of ADO's sales team. The program administrator and his assistant are the home office's industrial training specialists, while the area coordinators are the training specialists for their respective areas. These nine positions, currently filled by seven individuals, are the front line professionals of the AID program. The remaining five members of the staff provide the necessary supportive services for the office.⁴²

With only the program director and three other front line professionals in the home office and some 112 programs in various stages of operation, it is apparent that this is a highly decentralized program.

The Industrial Development Division (IDD), Alabama Development Office -- the primary agency which AID supports -- activities are of the highest state priority, as evidenced by Governor Wallace's appearance in paid advertisements for industrial development during the nationally televised football games in which universities from Alabama have participated, e.g., the prime time 1973 Sugar Bowl advertisements.

AID's director is a vital member of IDD's sales team, so much so that when ADO sent its representative to the "Invest in U.S. Seminar" in Dusseldorf, Germany, May 8-9, 1974, the directors of IDD and AID traveled as a team.⁴³

42. Personal interview with J. B. Tyson, Program Administrator, Alabama Industrial Development Training Program, Montgomery, Alabama (May 17, 1974).

43. Personal interview with Fred F. Denton, Jr., Industrial Development Director, Alabama Development Office, Montgomery, Alabama (May 17, 1974).

AID depends upon the employment service and local agencies for its wage and salary and labor force availability information, as is the case in North Carolina.

Again, in view of the supportive role of the State Technical Institutes and their geographical dispersion throughout the state, a brief examination of Alabama's geography is germane.

Alabama's total area is 50,708 square miles; its extreme length (north to south) is 327 miles, and its extreme width (east to west) is 210 miles; its geographic center is 32 miles north/northwest of the capital, Montgomery. Its population ranked 21st in the nation in 1970, with 3,444,165 citizens. It contains six SMSA's and one county of the Columbus, Georgia, SMSA.⁴⁴ Four of the six SMSA's -- Huntsville, Gadsden, Birmingham, and Tuscaloosa -- are north of the state's geographic center, while two -- Montgomery and Mobile -- are south of that center.

In December of 1973, there were 27 State Technical Institutes located in 21 of the state's 67 counties. Twenty-four of the institutes are designated as commuter institutes, i.e., bus service at no additional cost to the student is provided within the school's area boundary. Of the three institutes not designated as commuter institutes, one is for prison inmates only, located in Deatsville, Elmore County, and the other two are located in Jefferson and Dale Counties.

Thirteen of the 27 institutes are located in the state's six SMSA's -- three each in the Birmingham and Montgomery SMSA's, two each in the Gadsden, Tuscaloosa, and Mobile SMSA's and one in the Huntsville SMSA. As these SMSA's contain only 11 of the state's 67 counties, it is apparent that the institutes are located to serve the population center of the state, and not necessarily to aid in the development of the hinterlands.

44. Rand McNally, Standard Reference Map and Guide of Alabama, Chicago: Rand McNally (1972).

Organizations Summary

The greatest contrast in modes of administration of the programs are South Carolina's highly centralized and North Carolina's regionally decentralized efforts. These differences can be attributed primarily to Wade Martin.

Based on his North Carolina experience, Martin, in accepting the challenge to develop South Carolina's program, felt the need for direct control over the support activities he considered essential.⁴⁵ Thus, South Carolina's program is the most expensive, highly centralized and authoritarian program. It has the internal capability to conduct wage and salary and labor force availability surveys, a field force of industrial service representatives, and an equipment pool, with personnel to support it, which makes it virtually independent of the employment service and the Technical Education Centers.⁴⁶

North Carolina, Virginia, and Alabama, because of the limits of their central office staff and the lack of field representatives, are largely dependent upon the personnel of the local training institutions for the day to day coordination and supervision of their

45. Personal interview with J. Bonner Manly, op. cit.; personal interview with Woody Brooks, op. cit.; and personal interview with Joe E. Sturdivant, op. cit.

46. Personal interview with N. L. Ball, op. cit.; personal interview with Enoch Smith, Equipment Coordinator, DIS, TEC, Columbia, South Carolina (September 14, 1973); personal interview with Ashby Ward, Industrial Consultant/Public Relations, DIS, TEC, Columbia, South Carolina (September 17, 1973).

basically on-the-job training programs.⁴⁷ Local institutional facilities and equipment are provided on a limited basis, but training is conducted primarily on the industrial site.⁴⁸

With its large central office staff, area industrial service representatives, and special schools dedicated equipment, South Carolina is nominally less institution dependent. However, in recent years the state's predominantly pre-employment training programs have been moved increasingly into the technical centers,⁴⁹ and attitudinally it is becoming institution dependent.

While providing outstanding management control features, South Carolina's organization duplicates existing capabilities which are available to it.

Conversely, the North Carolina, Virginia, and Alabama programs and one recommended for Texas⁵⁰ are all more austere in their manning and thus more dependent upon existing educational personnel, facilities, and equipment for training, and upon the employment service for wage and salary surveys, labor force availability surveys, and recruitment, testing, and selection support.⁵¹

In all the states, the basic equipment for training consultants is that they be either trained or on-the-job experienced industrial engineers.⁵²

47. Harper, Cotton, and Little, Inc., Final Report and personal interview with Joe E. Sturdivant, op. cit.; personal interview with Preston Wilhelm, op. cit.; and personal interview with Jim Vaught, op. cit.

48. Ibid., Sturdivant, Wilhelm, and Vaught.

49. Ibid.

50. Ibid.

51. Personal interview with Henry Boudreau, op. cit.

52. Personal interview with John E. Riley, op. cit.; personal interview with Walt Delany, op. cit.; personal interview with Henry W. Warth, op. cit.; and personal interview with Ashby Ward, op. cit.

Cost

Any consideration of cost for start-up training must include not only the cost for the agencies which provide the training, but also the cost of the agencies which create the demand which necessitates the training. Therefore, the cost discussed below will include not only training agency cost, but the identifiable development agency cost as well.

South Carolina

From an initial expenditure of \$197,194 in fiscal year 1962, expenditures for all of the TEC's programs had risen to an annual expenditure of \$26,516,644 for fiscal year 1973. The total expenditures by TEC over the 12-year period amounted to \$121,093,311.⁵³

Table II-10 depicts a breakdown of expenditures by fiscal year for the TEC's categories of Administration (Admin.), Technical Education Centers (TEC), DIS, and Miscellaneous. Since the TEC's equipment expenditures indirectly support the Special Schools Program, it is of interest to note that of the total TEC expenditure of \$86,511,869, \$11,924,166 (14 percent) has been expended for equipment, \$58,222,496 (67 percent) has been expended for personnel, \$16,365,207 (19 percent) has been expended for overhead and miscellaneous.⁵⁴

Table II-11 depicts the breakdown of DIS expenditures by categories of personnel, equipment, and overhead for fiscal years 1962-1973. One of the salient features of this table is the amount expended for equipment: \$2,172,856 (19 percent), of the total expen-

53. The State Budget and Control Board, "The South Carolina State Budget, for Fiscal Years ending June 30, 1963, through June 30, 1974."

54. Ibid.

ditures by DIS. This equipment is dedicated as Special Schools equipment, controlled by DIS, and ready for installation by DIS personnel where ever required. The total amount of the expenditure represents a fair estimation of the cost of DIS equipment in its current inventory since DIS has had only one disposal sale during the 12-year period.⁵⁵

Table II-12 depicts the Development Board's expenditure, by categories of Administration, Industrial Development, and Miscellaneous for fiscal years 1962-1973. The Development Board's goal throughout this period has been primarily Industrial Development, even though they did not start listing it as a budget item until 1965. Therefore, in constructing the table, all items other than Administration (clearly labeled), and Industrial Development (once it had been labeled) have been grouped together as Miscellaneous. The combined total of Administration and Industrial Development, then, more clearly reflects Industrial Development cost. This is particularly true since fiscal year 1966.

Table II-13 combines the Development Board (Dev. Bd.) and DIS expenditures for a total expenditure figure. Column three (Total) shows the direct state investment in obtaining new and expanding industry, and column four depicts the number of new jobs announced for that year, while column five depicts the number of trainees. Column six shows the average cost per job created, and column seven shows the average cost per trainee. Here it should be noted that the average annual cost per trainee has ranged from a low of \$277 in 1966 to a high of \$787 in the first year, with costs over the last six years averaging \$616 per trainee, almost equally divided between demand creation -- \$8,253,427 -- and training -- \$8,555,645.

55. Personal interview with Enoch Smith, Jr., op. cit.

Table II-10

Technical and Comprehensive Education Expenditures
FY 1962-1973 South Carolina

<u>FY</u>	<u>ADMIN.</u>	<u>TEC</u>	<u>DIS</u>	<u>MISC.</u>	<u>TOTAL</u>
1962	76,429	56,850	63,615		197,194
1963	181,232	1,519,616	271,741		1,972,589
1964	102,389	1,431,851	358,934	265,064	2,158,238
1965	141,754	1,738,684	520,654	1,952,317	4,353,409
1966	255,797	2,449,039	826,675	1,055,278	4,586,789
1967	379,963	3,857,398	937,887	1,305,108	6,480,356
1968	415,065	5,507,629	1,415,447	100,000	7,433,141
1969	405,817	11,191,037	1,141,171		12,738,025
1970	593,500	12,617,618	1,360,573		19,571,771
1971	690,726	12,216,199	1,357,243	2,070,547	16,334,715
1972	918,099	12,998,987	1,651,404	3,181,950	18,750,440
1973	<u>935,783</u>	<u>20,926,961</u>	<u>1,629,707</u>	<u>3,024,193</u>	<u>26,516,644</u>
TOTAL	5,096,554	86,511,869	11,535,051	12,954,457	121,093,311

SOURCE: The South Carolina State Budget for the Fiscal Years Ending 1963-1974.

Key: ADMIN. = Administrative expenditures
 TEC = Technical Education Centers
 DIS = Division of Industrial Services
 MISC = Miscellaneous expenditures

Table II-11
Division of Industrial Services, Expenditures
FY 1962-1973 South Carolina

<u>FY</u>	<u>Personnel</u>	<u>Equipment</u>	<u>Overhead</u>	<u>Total</u>
1962	29,662	29,964	4,289	63,915
1963	152,432	57,970	65,339	271,741
1964	247,116	47,816	64,002	358,934
1965	333,218	67,542	119,894	520,654
1966	510,567	139,675	176,433	826,675
1967	626,154	154,987	156,746	937,887
1968	596,433	614,294	204,720	1,415,447
1969	636,231	247,032	257,908	1,141,171
1970	871,221	181,166	308,186	1,360,573
1971	801,252	213,790	342,201	1,357,243
1972	873,154	211,116	564,134	1,651,404
1973	<u>963,082</u>	<u>207,504</u>	<u>459,121</u>	<u>1,629,707</u>
TOTAL	6,640,522	2,172,856	2,722,973	11,535,051

SOURCE: The South Carolina State Budget for the Fiscal Years Ending June 30, 1963 through June 30, 1974.

During the last six years, North Carolina provided industrial development training to 56,098 trainees at a cost for demand creation and training of \$12,826,862, an average cost of \$229 per trainee (Table II-14).

During the last eight years, Virginia provided training to 41,000 industrial development trainees at a cost of \$11,223,387, an average cost per trainee of \$273 (Table II-15).

In the first two years of its operation, the Alabama program provided training to 4,904 trainees at an average cost of \$390 per trainee (Table II-16a). A noteworthy item concerning the Alabama program is that it is the only program, to date, using anything other than state appropriated funds for industrial development training; funds from both the Appalachia project and Comprehensive Employment and Training Act of 1973 (CETA) are being used. Also of interest is the fact that AID as a spending unit requested only \$750,000 for fiscal year 1974, but Governor Wallace recommended a \$1.3 million in the budget presented the legislature and so this became AID's planning target (Table II-16b).⁵⁶

Cost Summary

During the combined 28 years of operation for all of the states, a total of \$49,671,923 has been recorded as spent. In computing the costs for the development boards, all expenditures except those specifically designated for projects other than industrial development were assigned as demand creation costs. Demand creation costs were 54.9 percent (\$27,305,979) of the total, while training costs were 45.1 percent (\$22,493,964) of the total.

These figures show a wide disparity in cost per job created among states. South Carolina, from 1968-1973, spent an average of over \$2.8 million a year in demand creation and training, while North Carolina spent over \$2.1 million a year. During that period, a

56. Personal interview with Jim Vaught, op. cit.

Table II-12
South Carolina Development Board Expenditures
FY 1962-1973

<u>FY</u>	<u>Admin.*</u>	<u>Ind. Dev.</u>	<u>Misc.</u>	<u>Total</u>
1962	314,236		316,709	630,945
1963	328,409		325,476	653,885
1964	338,669		269,625	635,294
1965	322,295	123,400	327,432	773,127
1966	386,220	370,254	75,393	831,867
1967	1,059,609**	379,056	78,374	1,517,039
1968	458,164	611,038	266,538	1,335,740
1969	500,986	655,245	30,496	1,186,727
1970	515,306	839,574	43,294	1,398,174
1971	562,350	864,991	49,718	1,477,059
1972	581,218	921,086	53,019	1,555,323
1973	<u>521,568</u>	<u>1,230,901</u>	<u>91,901</u>	<u>1,844,370</u>
Total	5,899,030	5,995,545	1,954,975	13,839,550

SOURCE: The South Carolina State Budgets for Fiscal Years Ending June 30, 1963, Through June 30, 1974.

*Includes flight operations expenditures.

**Includes \$650,000 for purchase of executive jet aircraft.

Key: Admin. = Administrative expenditures
Ind. Dev. = Individual development expenditures
Misc. = Miscellaneous expenditures

Table II-13
South Carolina Cost, 1962-1973

<u>FY</u>	<u>Development Board</u>	<u>Division of Industrial Services</u>	<u>Total</u>	<u>New Jobs</u>	<u>Trainees</u>	<u>Average Cost New Jobs</u>	<u>Average Cost Trainees</u>
1962	\$ 314,236	\$ 63,915	\$ 374,151	18,483	475	\$ 20	\$787
1963	328,409	271,741	600,150	14,854	2,190	40	274
1964	338,669	358,934	697,603	13,959	2,785	50	550
1965	445,695	520,654	966,349	26,447	2,824	36	342
1966	756,474	836,675	1,583,149	18,724	5,044	85	277
1967	1,438,663	937,887	2,376,550	11,176	5,704	212	416
1968	1,069,202	1,415,447	2,484,649	19,771	4,081	125	608
1969	1,156,231	1,141,171	2,297,402	20,218	4,419	113	519
1970	1,354,880	1,360,573	2,715,453	10,530	4,534	257	598
1971	1,427,341	1,357,243	2,784,584	12,272	3,804	227	733
1972	1,493,304	1,651,404	3,144,708	13,449	5,403	234	582
1973	1,752,469	1,629,707	3,382,176	15,662	5,054	216	669
Subtotal							
68-73	8,253,427	8,555,645	16,809,072	91,902	27,295	183	616
Total	11,884,575	11,535,051	23,419,626	195,545	46,317	119	506

SOURCE: The South Carolina State Budgets for Fiscal Years Ending June 30, 1963, Through June 30, 1974.

Table II-14
North Carolina Cost

<u>FY</u>	<u>Development Board</u>	<u>Industrial Services Division</u>	<u>Institutions*</u>	<u>Total</u>	<u>New Jobs</u>	<u>Trainees</u>	<u>Average Cost New Jobs</u>	<u>Average Cost Trainees</u>
1968	701,205	104,020	947,495	1,752,720	31,297	11,147	56	157
1969	649,746	111,266	815,575	1,576,587	31,067	9,595	50	164
1970	2,051,696**	121,877	797,725	2,974,298	22,586	9,385	132	317
1971	993,653	125,789	816,255	1,938,697	25,433	9,603	76	202
1972	1,069,252	135,601	801,033***	2,005,886	26,232	9,334	76	215
1973	1,926,479	134,325	597,890	2,578,674	22,172	7,034	116	381
Total	7,392,031	732,878	4,775,973	12,826,862	158,787	56,098	81	229

*Estimates of cost based on \$85 per trainee, the actual figure reported for FY 72 as a representative cost.

**Includes purchase of aircraft.

***Actual cost figure.

SOURCE: New Industry Training Program, Enrollments, Expenditures, July 1, 1971-June 30, 1972, Report, North Carolina.

Table II-15
Virginia Costs

<u>FY</u>	<u>Development Office</u>	<u>Special Training Division</u>	<u>Total</u>	<u>New Jobs</u>	<u>Trainees</u>	<u>Average Cost New Jobs</u>	<u>Average Cost Trainees</u>
1966	759,920	90,000	849,920	17,500		49	
1967	717,315	189,804	907,119	6,000	15,581	151	300
1968	739,880	692,991	1,425,871	16,700		85	
1969	859,430	628,000	1,487,430	8,400		177	
1970	894,910	757,305	1,652,215	3,349	3,824	493	432
1971	1,006,670	376,457	1,383,127	14,120	5,730	97	241
1972	1,055,475	759,880	1,815,355	15,150	7,586	119	239
1973	<u>1,142,271</u>	<u>560,430</u>	<u>1,702,701</u>	<u>19,298</u>	<u>8,279</u>	<u>88</u>	<u>205</u>
Total	7,168,571	4,346,062	11,223,738	100,517	41,000	111	273

SOURCE: The Virginia State Budgets for Fiscal Years Ending June 30, 1966, Through June 30, 1974.

Table II-16a
Alabama Costs

<u>FY</u>	<u>Development Division</u>	<u>Training Division</u>	<u>Total</u>	<u>New Jobs</u>	<u>Trainees</u>	<u>Average Cost New Jobs</u>	<u>Average Cost Trainees</u>
1972	443,218	250,000	693,218	20,920	1,816	33	381
1973	417,284	800,000	1,217,284	42,878	3,088	28	394
Total	860,502	1,050,000	1,910,502	63,798	4,904	29	390

Table II-16b
Training Revenue

<u>FY</u>	<u>State Appropriations</u>	<u>Appalachia</u>	<u>Revenue Sharing</u>	<u>Total</u>
1972	250,000			250,000
1973	250,000	300,000	250,000	800,000
1974	1,300,000	300,000	250,000	1,850,000
Total	1,800,000	600,000	500,000	2,900,000

SOURCE: The Alabama State Budgets for Fiscal Years Ending June 30, 1972, Through June 30, 1974.

reported 91,902 jobs were created in South Carolina and 157,787 in North Carolina. South Carolina's average cost per new job was \$183 and per trainee \$616, while North Carolina's was \$81 per new job and \$229 per trainee.

Harper, Cotton, and Little (HCL) in their final report to Texas⁵⁷ provided the cost figures shown on Table II-17a, which indicates an average cost per new job in the range of \$116 to \$133, with an average cost per trainee in the range of \$232 to \$266.

Using HCL figures, but adjusting for experience, i.e., about 50 percent of the total amount for demand creation, and training for only 35 percent of the jobs created, the costs then range from \$150 to \$178 per new job and \$455 to \$507 per trainee (Table II-17b).

The Industrial Development Training Process

The similarity of programs made it possible to define an "Industrial Development Training Model" (Figure II-1) for use in the analysis of the process. Since South Carolina's program is the best publicized and was the initial and focal point for this study, it will be utilized as the base program, and only noteworthy variations from its modus operandi will be discussed in detail.

Demand Creation (Stage 1)

The demand creation agencies are the state development boards/industrial commissions, public utilities, chambers of commerce, industrial realtors, financial institutions, transportation companies (particularly railroads), and management consultants. These agencies serve as match-makers, so to speak, for the given locales and industries.

57. Harper, Cotton, and Little, Inc., Final Report, op. cit.

Table 11-17a
Estimated Texas Expenditures

Level	New Jobs	Trainees	Direct Cost \$175 per* Trainee	TEA Staff and Equipment	TIC Staff	Total	Average Cost per New Job	Average Cost per Trainee at 50 percent New Job
A	30,000	15,000	2,625,000	551,199	275,868	3,452,067	\$116	\$ 232
B	20,000	10,000	1,750,000	401,524	205,108	2,356,632	118	236
C	10,000	5,000	875,000	275,512	155,736	1,328,268	133	266
				5 (Staff)-	5			

Table 11-17b

								at 35 percent
A	30,000	10,500	1,837,560	551,199	2,388,659	4,777,398	\$ 159	\$ 455
B	20,000	7,000	1,225,000	401,524	1,626,524	3,253,048	162	464
C	10,000	3,500	612,500	275,512	888,012	1,776,024	178	507

*Training Computation: An average of 52.45 trainees per plant start-up; 12 week course three hours a day, four days per week; one lead and three assistant instructors per course; average cost of supplies and material \$94 per trainee = \$175 per trainee direct cost.

SOURCE: Harper, Cotton, and Little, Inc., Final Report.

In their match-making role, these agencies have the responsibility of bringing together locales and suitable industries. The community leaders introduce their locales to the industrial society via a development agency, and until this is accomplished, no other actions can be taken. Once the community leaders decide to invite industry to locate in their community, the development agency seeks out potential relocating industries. Then, when the virtues of the community and the general needs of a relocating industry are a close enough match, the development agency brings the two together for a community leader chaperoned courtship. If, for whatever reason, the industry, community leaders, or the community at large reject one another, as they often do, the development agency must begin its search for a match anew.

In South Carolina, there are both voluntary and professional demand creation forces seeking potentially relocating industries for the state.

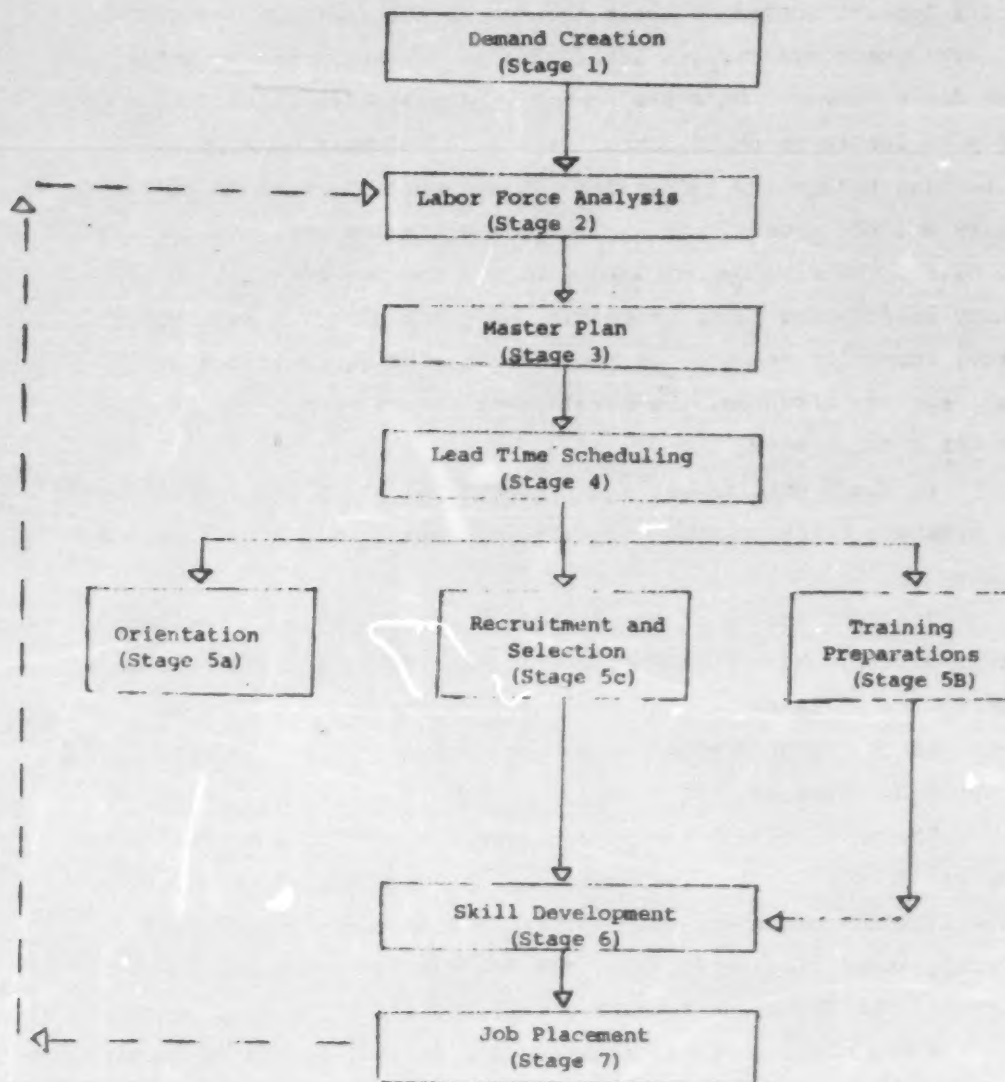
The most active of the voluntary groups is South Carolina's Committee of 100, which the State Development Board credits with being a prime source of leads.⁵⁸ The work of this and other voluntary citizens' groups is both significant and noteworthy, but unfortunately it is not quantifiable.

The professional demand creation agencies include the State Development Board, local Development Boards, Chambers of Commerce, public utilities companies, transportation companies (particularly railroads), industrial realtors, financial institutions, management consultants, the Technical Education Centers, and TEC's central office.

Whereas all of these agencies are active, the State Development Board is the focal point of the state effort, and it is estimated

58. Personal interview with Woody Brooks, op. cit.

Figure II-1
Industrial Development Training Model



that about 90 percent of the relocating industries are processed by the State Board.⁵⁹ One of the reasons for this is the Board's attitude:

The board cannot wait for industry to come to it, so the board has a manager of business development who goes to industry and presents the state's advantages. It is his job to develop a business and create markets for a product -- a product which in this case happens to be the State of South Carolina.⁶⁰

With its own executive jet aircraft the Board has the capability to reach out to potential relocating industries. It brings their executives to South Carolina for a finely honed, expertly manned sales presentation which extolls the virtues of sites in the Board's file of suitable industrial locations.

These sites have been centrally catalogued and categorized by acreage, water usage, utilities, and transportation availability. Because the state's communities and citizenry respect and support the State Development Board's efforts in this area (Appendix 4),⁶¹ the board is able to maintain an up-to-date file on all such locations.

By the sheer volume of its cases, the State Development Board must be considered the leader in the matter of job demand creation. But, it is the community that provides the basis for the

59. Personal interview with J. Bonner Manly, op. cit.

60. "The South Carolina State Development Board," op. cit., p. 3.

61. Louis Harris and Associates, Inc., The Priorities for Progress in South Carolina, Study Number 2130, Columbia, South Carolina: Louis Harris and Associates, Inc. (1971).

demand. Unless the community wants industrial development, there will be none, no matter how good the job or record of the State Board. Three examples will illustrate this point.

In one county, the local Industrial Development Agent stated that his county would not seek or encourage any industry that employed over 500 workers. This county feels that such industry would become the dominant economic factor in the county, and this they reject.⁶²

A second county, a Technical Education Center co-sponsor, has attracted two new industries employing 280 workers, and has had expansion in only five of its 11 pre-1962 industries, providing only 252 additional jobs during the years 1963-1973. Though the county appears to be a prime candidate for industrial growth, the county leaders are quietly but unalterably opposed -- ergo, relatively no industrial growth.⁶³

A third county, one of the most underdeveloped, urgently needs industrial development. On three separate occasions, large industries have shown an interest in the county. The State Development Board, local development board, and the bulk of the citizenry who would comprise the work force have supported each of these potential industries. However, a group of unofficial community leaders with opposing labor force and development interests have blocked each development.⁶⁴

Recognizing that "Local industrial development is a community effort in which many people must be involved,"⁶⁵ in 1970, North

62. Personal interview with H. C. Lockwood, Industrial Development Board, Horry County, Conway, South Carolina (September 28, 1973).

63. Personal interview with Woody Brooks, op. cit.

64. Personal interview with Walt Delany, op. cit.

65. "North Carolina Governor's Award Program," op. cit.,

Carolina initiated a "Governor's Award Community" program. The objectives of the program are twofold: (1) To help prepare the smaller community for industrial development, and (2) to provide the Commerce and Industry Division a better inventory of communities to present to potential relocating industries.

To be designated a "Governor's Award Community," a town must meet the established criteria in seven categories:

1. Organization for Industrial Development

A. Promotion

An industrial promotion organization must be established for the purpose of promoting the community for industrial plant location....

B. A chartered Development Corporation must exist that is capable of financing the construction of industrial buildings that can be leased to industrial clients.

2. Community Audit

A Community Audit of the community must be completed. The Audit must bear the signatures of a designated official of the municipality or of the recognized local development organization, attesting to the authenticity of the data contained therein.

3. Industrial Sites

A specified number of industrial sites must be developed and full information on each submitted on the industrial site forms of the Commerce and Industry Division. To qualify, each site must have a minimum size of ten (10) acres. There is no maximum size limitation. Some element of control over these sites must be shown. This could be ownership by the development corporation, an option, letter of first refusal, etc. The critical factor is that the site could be sold to a prospect at a definite price.

Requirements by population are as follows:

Population under 3,000

Submit at least four (4) industrial sites. If the community is served by rail, at least two (2) of these sites must be able to be served by rail.

Population from 3,001 to 7,000

Submit at least five (5) industrial sites. If the community is served by rail, at least three (3) of these sites must be able to be served by rail.

Population from 7,001 to 15,000

Submit at least six (6) industrial sites. If the community is served by rail, at least four (4) of these sites must be able to be served by rail.

4. Brochure

An up-to-date brochure or other form of promotional literature must be prepared for the community. In addition to the usual local information normally contained in such publications, yours should contain information on industrial sites, utilities with rates and a statement on the interest and ability of the local development corporation to finance construction of industrial buildings.

In order to be effective, promotional literature need not be expensive and elaborate. What is needed is a concise presentation on the various aspects of community makeup.

5. Existing Industry Committee

Each industry within the town is to be visited, preferably by a two-man visitation team. The purpose of this contact is to gain existing industry's awareness and support of the community's effort to promote economic development. It is important also to offer assistance to problems

encountered by existing industry. The list of industries is to be obtained from the North Carolina Directory of Manufacturing Firms plus any which have located since the directory was published. The list should include those firms normally associated with a town, even if they are not inside the city limits. Attached is the suggested call sheet or record form to be used. A copy of each industry visit is to be included in the materials to be submitted to Commerce and Industry in the judging process.

6. Planning Requirement

An organized, functioning Planning Board, appointed by the governmental unit is a requirement in the Governor's Award Program. Field Office Personnel of the Division of Commerce and Industry and Community Services will meet with the Chairman for this category and determine the actual planning requirement for the community. This will ensure flexibility for individual communities rather than set at state-wide requirement which might not be meaningful to certain communities.

7. Cleanup - Fixup

An organized cleanup - fixup campaign, involving all sectors of the populus, must be conducted. Considered lightly by many, a well-organized campaign to improve the visual aspects of the community can have a dramatic effect in developing a positive attitude toward overall community development.⁶⁶

As of July 1, 1973, 9,814 new jobs had been created in 46 of the 72 communities which had been designated as a "Governor's Award Community."⁶⁷

66. Ibid., p. 4-6.

67. Ibid., p. 1.

Demand creation in Alabama does not differ significantly from that in the other states, but it is noteworthy that the Director, Industrial Development Division, Alabama Development Office, has an annual budgeted salary larger than the Director, Alabama Development Office, who is his boss.⁶⁸

Labor Force Analysis (Stage 2)

This stage of the process consists of a job analysis to determine the skills, knowledge, and abilities required of the worker population as well as the number of workers required in each occupational family and for each position within that family.

The analysis can be as simplistic as a restatement of the current manning tables, job classifications, skills and equipment requirements and the measures required to implement them in the new plant, or as detailed as a sophisticated task-based job analysis. The method most frequently employed in all states is the first one.

In this stage, South Carolina's Division of Industrial Service's Training Consultants visit the old plant and become familiar with the production lines and methods employed. They ascertain the number of workers the firm wants; in what skills and skill levels the firm needs them trained; and what sequencing of employees, if any, will be required.⁶⁹ Both the central staff training consultants and the local industrial service training representatives involved in such missions use the simplistic approach of "how many, in what skills, and when do you want them," in keeping with the customer satisfaction theme -- the

68. State of Alabama, Executive Budget, State General Fund and Trust Funds for Fiscal Years ending September 30, 1974, and September 30, 1975, p. 232.

69. Personal interview with Henry W. Warth, op. cit.

company gets what it wants and DIS does not question whether that is really what is required.⁷⁰

Master Plan (Stage 3)

When the manpower needs have been specified, by either a simplistic or a sophisticated approach, a master plan is prepared and submitted to the company for approval. This plan contains a complete study of labor availability, the determined skill requirements, and the prevailing wage rates and fringe benefits for each of the job classifications. The plan enumerates the recruitment and selection criteria for each of the job classifications, sets forth the selection procedures for training and ultimate hiring, and provides the trainers, in broad outline form, with training objectives with respect to skills, knowledges, and abilities required. It also provides a general time frame for the necessary completion date of each of the skill development courses. When this master plan is approved by the industry, work then commences on the next stage.

In South Carolina, this plan is prepared by the industrial training consultants, industrial consultant/public relations men, and the local industrial services representative, when appropriate. The plan incorporates information from the Industry Wage and Practices Survey reports and the Labor Force Availability Surveys.

Once the plan is approved by the firm, during its execution, monthly meetings with company decision-makers are held to evaluate progress and make such modification as may be required.⁷¹

70. A consensus opinion of all the Industrial Training Consultants and Industrial Service Representatives Interviewed (7), September, 1973.

71. Personal interview with Henry W. Warth, op. cit.

Lead Time Scheduling (Stage 4)

After the industry approves the Master Plan, detailed lead time scheduling is worked out. Working backward from the date the plant is scheduled to commence operations, the training courses, the selection process, and the testing and recruitment activities are scheduled for each job classification so that the training courses' completion coincides with the requirement for the skill. For the pre-employment trainees, it is by this stage of the process that workers who successfully complete the training are assured a job at completion of the training course. Appendix 5 is a sample 29-month lead time schedule for 18 different operations in a South Carolina plant.

Orientation (Stage 5-A)

Most relocating industries bring with them a limited number of key personnel who must be sold upon the virtues of their new locale. The favorable attitude of these personnel is vital to good industry-community relations. For this reason, public relations/ community selling events are scheduled for the relocating personnel and their families. In these sessions, the mores and customs of the community and work force of the new area, housing conditions, educational, recreational, and cultural opportunities of the state and locale are presented. It is desirable that planned, guided visits to the new locale be conducted as a part of this selling campaign for both the key personnel and their families. These personnel are going to be "the company" in the new locale, and a poor attitude which results from initial misunderstandings can only create community/industry problems in the future.

In South Carolina, the orientation of the firms' relocating personnel and families is coordinated by the Industrial Consultant/ Public Relations man. These orientations are currently being presented upon request, and the number of requests has been decreasing.

When requested, a team of five to seven community leaders, realtors, educators, and just plain citizens from the chosen community are assembled and taken to the home plant to brief the relocating personnel and their families.⁷²

In Alabama, AID's concern is with the orientation of management and supervisors concerning workers' mores, customs, and attitudes. A management orientation course is offered which features the development of communication skills and information concerning differences in rural and urban workers,⁷³ such as those found in works similar to John A. Fossum's.⁷⁴

Training Preparation (Stage 5-B)

Once the plant site selection announcement is made and information is obtained from some type of training and development system, the curriculum is developed. After the lesson plans are prepared, training manuals printed and training aids produced, the actual physical plant for teaching is prepared.

Equipment is obtained by borrowing (if necessary) from the industry, by purchasing either new or used equipment, or by utilizing equipment already available in the states' vocational training institutions. It is positioned for training in either locally furnished facilities, in nearby vocational institutions, or, if feasible, in the plant itself. If locally furnished facilities are used, then the installation of the necessary equipment to replicate a production line and working conditions is required.

72. Personal interview with Ashby Ward, op. cit.

73. Personal interview with Jim Vaught, op. cit.

74. John A. Fossum, "Urban-Rural Differences in Job Satisfaction," Industrial and Labor Relations Review (April, 1974), Vol. 27, Number 3, p. 405-409.

At the same time that the director of training is overseeing the preparation of the physical training site, he is also preparing by recruiting instructors from the industry, local vocational institutions, or local skilled craftsmen. Once recruited, the instructors are provided instructor training and prepared for the student-instructor relationship. In all cases, these instructors are paid by the states.

As more of the training moves into the South Carolina TEC's, there is less requirement for extensive training facilities preparation. However, DIS still maintains the capability to establish a facsimile production line in a locally provided site, in the new plant itself, or in a TEC at no cost to the firm involved.

DIS's Equipment Coordinator is responsible for over \$2,172,856 worth of Special Schools' dedicated equipment. He supervises the TEC warehouse operators who select, in conjunction with the Industrial Training Consultants, the appropriate equipment for a Special School. It is then transported to the training site and installed by DIS warehouse personnel. In addition to the transport/riggers/installers, DIS also maintains an internal equipment repair and rebuild capability. DIS's Equipment Inventory and Control Section is responsible for maintaining the inventory records of all TEC equipment, regardless of its source of procurement or its location within the TEC's. Thus, in effect, the Director of DIS is the equipment coordinator for not only DIS but for all 17 TEC's as well.⁷⁵

As will be discussed below, training in North Carolina, Virginia, and Alabama is primarily on-the-job training, and is plant or institution bound, so that the requirement for a South Carolina type capability does not exist.

75. Personal interview with Enoch Smith, Jr., op. cit.

Recruitment and Selection (Stage 5-C)

One of the prime reasons industry selects a relocation site is the supposed availability of the human resources necessary to staff a new plant. To translate that availability from numbers in a survey to a body of trained workers capable of meeting industry's demands requires a well-executed recruitment program. Ideally, an up to date survey of labor force availability would have been conducted and used in the initial selling phase. The information in this survey would include such characteristics of the available and interested local population as sex, marital status, residence, distance from proposed plant site, acceptable commuting distance, education, training, current employment status (unemployed, underemployed, fully employed but looking for a change), wage rates of those currently employed, previous experience and, if necessary, attitude towards shift work.

All of these desirable, and demonstrably obtainable, manpower factors facilitate a planned recruiting campaign. They also provide information as to which job factors stimulate the interest of the potential labor force. This helps in refining the advertising and media campaign needed to obtain the trainee/work force.

If there is, in fact, a local need for a new or expanding industry to utilize excess human resources, then a properly planned and well-executed recruitment campaign results in more than sufficient applicants for the trainee and job slots, and there is a relatively high degree of selectivity.

The personnel recruited are tested, using valid job-related testing instruments. They are then classified, and those persons found most suited are slotted into training programs.

This recruiting, testing, classifying, and selecting process continues as long as there are courses being offered to support the new industry.

In South Carolina, DIS policy dictates that recruiting is the "responsibility of the Industrial Training Consultant"⁷⁶ and that the recruiting specialist will assist in the development of recruiting techniques and in the interviewing of trainee/job applicants. In fact, however, industry is now doing its own recruiting with limited help from DIS.⁷⁷

The selection process is also basically an employer-run operation. Neither DIS nor the Employment Service does any testing or classifying of individuals. Almost without exception, those personnel who apply for training and meet minimum industry established standards are accepted into the training program. Those who ultimately prove themselves to be unqualified are eliminated from the training course and job placement phases by TEC sponsored instructors. In this manner, when the individual fails to qualify for employment, TEC is the culprit rather than the industry.⁷⁸

Using the current methods of employer-run operations, there is little employment of individuals with no previous work experience. All of the industry representatives interviewed (plant managers and personnel directors) indicated that they were only hiring individuals with previous work experience.⁷⁹

76. "TEC's Special Schools and South Carolina Industry," Impact, Vol. 7, No. 3 (April, 1974).

77. Personal interview with William T. Daniels, Labor Market and Manpower Analyst (Recruiter), DIC, TEC, Columbia, South Carolina (September 20, 1973).

78. Personal interview with Ashby Ward, op. cit., and personal interview with William T. Daniels, op. cit.

79. Personal interview with Richard Sells, Industrial Relations Manager, Fiber Industries, Florence, South Carolina (September 27, 1973); personal interview with R. L. Hatcher, Manager of Administration and New Products Program, G. E. Plant, Florence, South Carolina (September 27, 1973); and personal interview with Jack Ferrara, Training Director, Cummins Engine Plant, Charleston, South Carolina (September 29, 1973).

North Carolina's stated policy is:

North Carolina's Industrial training program makes a conscious effort not to infringe on the company's right of selection. However, at the company's request, the Employment Security Commission will test and screen job candidates. Only those applicants meeting the physical and mental criteria established for a particular job will be referred to the company for further evaluation.⁸⁰

Virginia's policy is:

If a company so desires, the Virginia Employment Commission will screen and test prospective employees.... It is important to note that final selection of the employee is completely up to the discretion of the employer. Special training does not advise a particular company to hire any individual. Selection of employees is up to the businessmen.⁸¹

Alabama authorities state:

If desired, the A.I.D. Training staff will assist in the advertising and recruitment of applicants.

After this screening, the applicant must then be interviewed and selected by a company official. The trainees will go on the company payroll at a time and rate established by the company. The trainee will be terminated from the training program if his progress is not satisfactory.⁸²

80. Industrial Development Brochure, "Glad You Asked That," North Carolina Department of Community Colleges, State Board of Education, Raleigh, North Carolina, undated.

81. Industrial Development Cinema-Sound Presentation, Special Trainee Division, Virginia Community College Systems, undated.

82. Alabama Industrial Development Training Brochure, "Commitment by the State of Alabama," Division of Vocational-Technical and Higher Education, State Department of Education, Montgomery, Alabama, undated.

Howard said:

Trainees selected are not usually former welfare recipients, but persons who are "underemployed" in their current jobs. Typical examples include grocery store clerks and gasoline station attendants who have the potential to work in more skilled, higher paid jobs.⁸³

Thus, it can be deduced that the programs are not providing a "leap-frogging" effect for the labor force; instead, the effect is one of pull-through of the current work force.

Skill Development (Stage 6)

At the time indicated by the Lead Time Schedule, those individuals selected for training are provided skills development which enables them to perform the jobs, duties, and tasks of the positions in which they are placed. The training may or may not be conducted on the worker's time; done with or without pay; and handled either as pre-employment or on-the-job training. The trainees are taught the full requirements and responsibilities of the positions, and their previously acquired skills, knowledges, and abilities are enhanced by attendance in a performance-oriented curriculum of instruction.

In South Carolina, over one-half of the Special Schools' training during the last two fiscal years was pre-employment training. Personnel enrolled in these courses, which lasted from four to 20 weeks, three to five nights a week, three to four hours a night, attended classes on their own time and without compensation.

83. Ellen L. James, "'Underemployed' Persons Trained Free in Program," Montgomery Advertiser (September 1, 1973), p. 5.

Attrition ranged from 10 to 45 percent, the higher rate directly related to the length of the courses, with an average of about 25 percent.⁸⁴

Pre-employment training is offered under the following terms:

I understand that by accepting this training, I am not under obligation to accept work with any specific firm, nor am I assured of being offered employment upon successful completion.

Even with these terms, South Carolina has never failed to find sufficient trainees to meet Industry's needs.⁸⁵

The training is conducted in accordance with South Carolina's "Analytical Method of Training Instructor's Manual." The general basis of AMT is that it

...has been designed and developed to aid rapid and effective learning of individual operations, and eliminate the obstacles which are usually encountered in training by traditional methods.⁸⁶

The fundamentals of the procedure entail the analysis of the duties, tasks, and elements of the total operation to determine the necessary skills and abilities.

84. Personal interview with Henry W. Warth, op. cit.

85. Personal interview with John E. Riley, op. cit.

86. South Carolina State Committee for Technical Education, Analytical Method of Training-Instructors' Manual, Columbia, South Carolina: South Carolina State Committee for Technical Education (1967).

After instructional strategies are devised, and training aids developed, the operations are taught by component elements and then formed into work cycles. The physical requirements of the job are defined, by engineering job analysis method (motion and time study), and the requirements are taught and repeated until stamina and perseverance in the performance of the operation is developed.

It is interesting to note that where South Carolina authorities praise the virtues of pre-employment training, for both trainee and industry, and seemingly have no difficulty in obtaining sufficient personnel to fill every course offered,⁸⁷ North Carolina authorities consider pre-employment training unacceptable for that state's citizenry, and thus 90 percent of their training is on-the-job training (OJT).⁸⁸ While neither Virginia nor Alabama authorities are as adamant as those of North Carolina concerning the acceptability of pre-employment training, their primary focus is OJT.

Job Placement (Stage 7)

For the job placement stage in a pre-employment program, each of the above stages is scheduled and interfaced in such a manner that the trainees are placed on the firm's payroll to ensure that full scale operations can commence upon completion of the physical plant without any delays due to labor problems. In the OJT mode, job placement is concurrent with selection for training, and this stage is not applicable.

In South Carolina, job placement upon the completion of pre-employment training has never posed a problem. The training is

87. Interview with John E. Riley, op. cit.

88. Interview with Joe E. Sturdivant, op. cit.

conducted in a series of courses and trainees are enrolled with due consideration to average attrition rates. In the event that attrition is less than average, the next class size is simply reduced. The overall results have been that every Special School graduate who has wanted a job upon graduation has been hired.⁸⁹ At the same time, industry reports that placements have met their needs.

Summary

A final note in discussing these accomplishments must be offered as a caveat concerning the successes of these states' programs. The jobs created ranged across the spectrum from "cut and sew" textile industry jobs to skilled metal working automotive industry jobs. However, the biggest percentage of them were of the relatively low skill level, narrowly defined and quickly trainable category.

The location of the new plants with high skill level job requirements is highly correlated with the advanced industrial development counties. However, more often than not, plants with low skill job requirements also located in those same areas.

For example, the Piedmont area of South Carolina continued to attract low skill level, labor intensive industries while it had the lowest unemployment rate in the state and after South Carolina officials considered it to be fully developed, insofar as labor intensive industries were concerned. Thus, despite the tight labor market there and a labor surplus in the Coastal Plains, some low skill level job requirement industries continued to seek the "better" counties in which to locate.

⁸⁹ Personal interview with J. Bonner Nanly, op. cit.

Insofar as the training itself was concerned, the following is not atypical. A new high skill level industry locates in an area, it recruits its work force from the next lowest skill level industry in the "pecking order" and so on down the line until the lowest level industry recruits its replacements from the service sector - the supermarket clerks and gasoline station attendants. Thus, there is a gradual upgrading of worker skills but unfortunately no "leapfrogging."

The key words for these programs are INDUSTRY'S NEEDS. These programs are adjuncts to industrial development, i.e., industrial development training programs. The question which remains is, "Are they also by chance human resource development programs for those in greatest need of development?"

Chapter III

ANALYSIS OF THE DATA

The study of the industrial development training program of the four states indicates that variations in modus operandi are more a matter of emphasis than substance. The great variations existing between the decentralized North Carolina and highly centralized South Carolina programs, the longevity of the programs with their complete, comprehensive and readily available data, and their regional similarity resulted in their being the focus of the analysis.

The analysis was conducted to determine if: (1) the existence of a start-up industry training program in a region or locale had resulted in a change in industrial relocation trends, and (2) the presence of such a program had resulted in a "leapfrogging" effect in the labor force, particularly in the areas of greatest human resource development need, the rural areas.

The Data

The data for analysis included comparable socio-economic characteristics of the population contained in the Census of Population

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for North Carolina¹ and South Carolina² for 1950, 1960, and 1970; industrial location data, by county, SIC, number of plants and number of employees by year, contained in the 1973-1974 industrial directories of North Carolina,³ and South Carolina;⁴ and the regional definitions for each county and the training institution locations provided by the industrial development training directors.

From this base of over 1,400 variables per county, 80 were derived (Appendix 6) and used in the analysis. From these 80, six were

1. U.S. Department of Commerce, Bureau of the Census, General Social and Economic Characteristics, North Carolina, 1970, (PC(1)-C35, Washington, D.C.: U.S. Government Printing Office, April, 1972); General Social and Economic Characteristics, North Carolina, 1960 (Vol. 1-C35, Washington, D.C.: U.S. Government Printing Office, 1963); and General Social and Economic Characteristics, North Carolina, 1950 (Vol. 2-C33, Washington, D.C.: U.S. Government Printing Office, 1952).

2. . General Social and Economic Characteristics, South Carolina, 1970 (PC(1)-C42, Washington, D.C.: U.S. Government Printing Office, March 1972); General Social and Economic Characteristics, South Carolina, 1960 (Vol. 1-C42, Washington, D.C.: U.S. Government Printing Office, 1963); and General Social and Economic Characteristics, South Carolina, 1950 (Vol. 2-C40, Washington, D.C.: U.S. Government Printing Office, 1952).

3. North Carolina Commerce and Industry Division, Department of Natural and Economic Resources, Industrial Directory of North Carolina 1973-1974, General Report (Raleigh, North Carolina).

4. South Carolina State Development Board, Industrial Directory of South Carolina 1973-1974, General Report (Columbia, South Carolina).

selected as hypotheses testing variables. Those were variable 71--the number of jobs created by new plants 1962-1973; variable 72--the number of new plants 1962-1973; variable 31--the median income of all families and unrelated individuals; variable 33--the unemployment level; variable 18--the white index of occupational position; and variable 19--the black index of occupational position. The figures for the latter four variables were obtained or derived from the 1970 Census of Population.

Assumptions

In testing the hypotheses, an assumption was made that the location of a technical education institution within a county was prima facie evidence of the presence of a start-up industry training program. In North Carolina, the local technical education institutions are responsible for the formulation and conduct of the basically on-the-job training programs from their inception. In South Carolina, the basically pre-employment training programs are conducted primarily in the technical education centers. Thus, regardless of the type of program, decentralized or centralized, the technical education institutions are the focal point and an essential element of the industrial development training process.

In the planned test of the second hypothesis, it was to be assumed that evidence of improved median income for all families and unrelated individuals, improved employment levels, and improved white and black indexes of occupational positions would all be tangential evidence of a "leapfrogging" into the labor force in the rural area if a change in relocation trends had in fact occurred.

The Methodology

The statistical methodologies employed in the analysis of the data included factor analysis, regression analysis--including commonality analysis, cluster analysis and discriminant analysis.

Factor Analysis

In the interest of reducing the set of 80 variables to a much smaller set, while retaining as much as possible of the information (or independent variation) contained in the original set, factor analysis was the initial statistical tool employed. The factor analysis program accomplished three ends: (1) it reduced the 80 variables to 14 major factors for South Carolina, 17 major factors for North Carolina, and 15 major factors for the combined states, (2) it identified the important sources of variation without regard to the six hypotheses testing variables so that significant variables in the data could not be inadvertently ignored, and (3) it indicated which of the hypotheses testing variables interacted with the other variables. The EDSTAT-V⁵ program was used to provide factor scores and loadings, which were then displayed using the program LISTER. To check loadings and descriptions printed by the program LISTER, SPSS⁶ was used to run correlation matrixes of the hypothesis testing variables with factor scales. The results validated EDSTAT-V factor scores and loadings and program LISTER's processing of them.

5. Donald J. Veldman, EDSTAT-V User's Manual CDC 6600-Computer Program for Statistical Analysis (Austin, Texas: Ibid. Inc. 1971).

6. Norman H. Nie, Dale H. Bent, Hadlai C. Hull, Statistical Package for the Social Sciences (New York, New York: McGraw-Hill Book Company, 1970).

Regression Analysis

The next step in the analysis was a series of one-on-one (single predictor) regression analyses in which each of the six testing variables was used as a dependent variable. From these regressions, the variables for inclusion in six multiple regression models were chosen. The criterion for selection was an F-test significance level of .10 or less, the rationale for this being that with the reduced degrees of freedom of the multiple regression model, any variable with greater than .10 level of significance as a single predictor would not support an F-ratio significant at the .05 level or better in a multiple predictor model. In addition to the predictor chosen in this manner, dummy variables for state, SMSA's, region, and technical educational institution locations were included in order to compare models and ascertain whether any or all of those four aspects were significant. The next step in the regression analysis was an analysis of variance. Finally, since in interpreting regression results there is always some ambiguity due to the iterative process by which the equations are built, compounded in this case by the heavy correlation of predictors, and since it is difficult to determine how much variation is explained by the joint contribution of the predictors, in order to ascertain what portion of the predicted variation was due to unique contributions and what was due to shared contributions, Veldman's Commonality Analysis Program (COMMAP)⁷ was used. COMMAP is an iterative program in which the regression equations are built with every predictor as a single

7. Donald J. Veldman, COMMAP, A Computer Program for Commonality Analysis, unpublished manuscript (Austin, Texas: Department of Educational Psychology, Project PRIME, University of Texas, February, 1975).

predictor and with the predictors in every possible combination. Since it would have been unfeasible to use every possible combination of 80 predictors, the data was partitioned into six sets of highly related variables -- population, employment, income, education, racial mix, and region and state. The commonality iterative process was then applied to the sets, ultimately providing the percent of RSQ due to each set singly and to all sets in every possible combination.

Cluster Analysis

Cluster analysis was then conducted on each of the six hypotheses testing variables for the combined states' data to add greater depth to the analysis. The combined states', vis-a-vis independent states', clustering solutions were chosen for comparative purposes with the regression results because of the added degrees of freedom provided by pooling both states' data.

Discriminant Analysis

Discriminant analyses then were performed for each of the six derived hypotheses testing clusters.

A Comparison of Regression Analysis and Discriminant Analysis Function

Since regression analysis and discriminant analysis are two distinct statistical tools designed for different purposes, regression for hypotheses testing and discriminant for classification decision making, both were employed in this study to provide comparative analyses of the results of the industrial development process on the various regions and counties and their populations.

The Hypotheses

The first hypothesis tested was that the existence of start-up industry training programs resulted in a change in industrial relocation trends towards the rural areas.

The Tests of Hypothesis Number 1

The factor analysis loading of the hypothesis number 1 testing variables, new jobs created, variable 71; and new plants, variable 72; and the other variables which loaded in the same factor, are shown in Table III-1. A high number of plants in 1962, a high number employed in plants in 1962, and a high total county population are variables with high loadings for South Carolina, North Carolina, and the combined states; SMSA location loads high for both North Carolina and the combined states; while location in the Piedmont and counties with TEC's loads high for South Carolina only; and a high ratio of whites over 14 in the civilian labor force loads in the factor for the combined states.

Using dummy variables for state, region, SMSA, and TEC locations, regression analyses were run to ascertain whether any or all of those aspects were significant as predictors. For the new jobs variable, neither state (variable 80), region (variables 73, 74, 75, 76), SMSA (variable 36), nor TEC locations (variables 77, 78, 79) were significant predictors. While for new plants, neither state, region, nor TEC location were significant predictors, however, SMSA was significant at the .01 level. Appendix 7 contains the listings of the variables in order of entry (importance) in the equations for testing the number of jobs created by new plants (7a) and the number of new plants (7b).

Table III-1

Factor Analysis Loadings for
New Plants and New Jobs, 1962-1973

	Factor Loadings		
	South Carolina	North Carolina	Combined
High Number Jobs Created 1962-1973	.8812	.7177	.7002
High Number New Plants 1962-1973	.8452	.8279	.8362
Other Variables in Factor			
High Total County Population	.6755	.6766	.6421
High Number Employed in Plants 1962	.7991	.7278	.7566
High Number of Plants 1962	.8150	.7767	.8067
Likely to be an SMSA		.4015	.4493
Likely to be in Piedmont	.5466		
Likely to be a County with a TEC	.4890		
High Ratio of White 14+ in Civilian Labor Force			.4002
Variations Accounted for by Factor (Eigen Value)	7.7544	5.4919	5.7324
Factor Number	8	6	8
Principal Axis Analysis Trace	79.00	79.00	79.00
% of Trace Extracted	87.421	85.26	81.61
# of Roots	14	17	15

In interpreting these regression results, there remained much ambiguity due to the iterative manner in which the equations were "built," the variables entering the equations one at a time, the next to enter always being the variable not yet in the equation whose entry would mean the greatest increase in RSQ. The problem with this is that when there are predictors which are themselves heavily correlated, the first of several correlated variables to enter the equation gets almost total "credit" for an explained amount of variance (RSQ) -- credit which should have been shared by several variables.

Because the start-up training data was so heavily correlated, it was very difficult to decide how much variation was explained by "unique" contributions of predictors and how much variation was explained by "joint" contributions of predictors.

In order to ascertain what portions of predicted variation were due to "unique" contributions and what portion was due to shared contributions, COMMAP was used. Since it would have been unfeasible to use every possible combination of 80 predictors, the data was partitioned into six "sets" of highly related variables: Employment, Appendix 8a; Population, Appendix 8b; Income, Appendix 8c; Education, Appendix 8d; Racial Mix, Appendix 8e; Region, State, Appendix 8f. Then the iterative process outlined above was applied to obtain the important sets and the main predictor for New Jobs (Table III-2) and New Plants (Table III-3) and ultimately the RSQ for each set singly and all of the sets in every combination.

The regression analysis results were then cross-validated by cluster analyzing each of the six dependent variables, and then performing discriminant analysis to see if cluster membership could be predicted by using the original regression predictors as discriminant predictors.

Table III-2

New Jobs--The Important Sets and the Main Predictors

Population, Which Contained These Important Predictors:

.7897	VAR001	Total county population / 100
.6236	VAR024	Percent of county population in urban areas
-.5609	VAR025	Percent of county population in rural nonfarm areas
.5137	VAR036	SMSA
.3276	VAR037	Change 60-70, total county population

Employment, Which Contained These Important Predictors:

.4748	VAR027	Percent of employed in white collar occupations
-.4573	VAR028	Percent of employed working outside county of residence
-.4035	VAR034	Adjusted unemployment level
-.4543	VAR035	Subemployment level
.7722	VAR069	Number employed in plants, 1962
.7339	VAR070	Number of plants, 1962

Income, Which Contained These Important Predictors:

.4132	VAR020	White index of industrial position
-.4820	VAR030	Percent of families below poverty level
.4477	VAR031	Median income all families and unrelated individuals

Education, Which Contained These Important Predictors:

-.3662	VAR009	Ratio--Blacks 25+ LT 9th grade: blacks 25+
-.3578	VAR010	Ratio--Blacks 25+ LT 12th grade: blacks 25+
.3574	VAR011	Ratio--Blacks 25+ finished 12th grade: blacks 25+

Number To Left Of Each Variable Above Is That Variable's Validity
(Correlation Coefficient) As A Predictor For New Jobs

The Percent Of Total RSQ Accounted For By Each Important Set Or
Combination Of Sets By:

5.86	Employment
5.58	Income
27.23	Population and employment
27.70	Population and employment and income
6.52	Population and employment and education
13.91	Population and employment and income and education
86.80	Total percent of RSQ accounted for by above sets and combinations

RSQ is .82

Table III-3

New Plants--The Important Sets and the Main Predictors

Population, Which Contained These Important Predictors:

.7811	VAR001	Total county population / 100
.5301	VAR024	Percent of county population in urban areas
-.4774	VAR025	Percent of county population in rural nonfarm areas
.5002	VAR036	SMSA

Employment, Which Contained These Important Predictors:

.4513	VAR027	Percent of employed in white collar occupations
-.4203	VAR034	Adjusted unemployment level
-.4448	VAR035	Subemployment level
.8776	VAR069	Number employed in plants, 1962
.9505	VAR070	Number of plants, 1962

Income, Which Contained These Important Predictors:

-.4778	VAR030	Percent of families below poverty level
.4769	VAR031	Median income all families and unrelated individuals

Education, Which Contained These Important Predictors:

-.4674	VAR009	Ratio--Blacks 25+ LT 9th grade: blacks 25+
-.4576	VAR010	Ratio--Blacks 25+ LT 12th grade: blacks 25+
.4572	VAR011	Ratio--Blacks 25+ finished 12th grade: blacks 25+

Number To Left Of Each Variable Above Is That Variable's Validity
(Correlation Coefficient) As A Predictor For New Plants

The Percent Of Total RSQ Accounted For By Each Important Set Or
Combination Of Sets Is:

19.01	Employment
22.56	Population and employment
16.56	Population and employment and income
9.24	Population and employment and education
18.96	Population and employment and income and education
86.33	Total percent of RSQ accounted for by above sets and combinations

RSQ is .95

F-Tests had shown that two clusters was optimum number of clusters for each variable. (This was fortunate, since discriminant analysis becomes less and less reliable at predicting group membership as the number of groups is increased.)

Each observation county was given a cluster number for each of the hypothesis-testing variables. In each case, Cluster "1" was the "preferable" cluster, i.e., Higher Number of New Jobs, or Number of New Plants.

The important variables in discriminating between cluster for new jobs are shown in Table III-4, along with a crosstab of cluster predictor for new jobs showing predicted and actual cluster membership and number and percent misclassified.

The important variables in discriminating between cluster for new plants are shown in Table III-5, along with a crosstab of cluster predictions for new plants showing predicted and actual cluster membership.

The results of the factor analysis, regression analysis, and cluster and discriminant analysis reinforced one another. The first hypothesis was not supported by the results. On the contrary, regression model comparisons produced F-ratios showing that the location of the technical education centers was an insignificant factor in industrial location. The results continually showed certain variables to be highly associated with opening of new plants and creation of new jobs. These associations boil down to the simple fact that counties which had favorable educational statistics, employment, income, and industrialization continued to have them, while those that did not continued to do without.

Table III-4

Important Variables in Discriminating Between
Clusters for New Jobs

Group 1 is higher new jobs
Group 2 is lower new jobs

The higher the function score, the greater the likelihood of
being in Group 1.

A variable with a positive correlation coefficient will tend to have
higher values in Group 1.

A variable with a negative correlation coefficient will tend to have
lower values in Group 2.

Variable	Correlation Coefficient	Description
VAR001	.7984	Total county population/100
VAR070	.7069	Number of plants, 1962
VAR069	.6847	Number employed in plants, 1962
VAR024	.6042	Percent of county population in urban areas
VAR027	.5248	Percent of employed in white collar occupations
VAR036	.4934	SMSA
VAR003	.4812	Median school years, males 25+
VAR004	.4008	Median school years, females 25+
VAR030	-.4103	Percent of families below poverty level
VAR025	-.5394	Percent of county population in rural nonfarm areas

Crosstab of Cluster Prediction for New Jobs

		Predicted Groups	
		1	2
Actual Groups	1	23	2
	2	5	101

Number misclassified = 7, .053 of total

Table III-5

Important Variables in Discriminating Between
Clusters for New Plants

Group 1 is higher new plants.
Group 2 is lower new plants.

The higher the function score, the greater the likelihood of being
in Group 1.

A variable with a positive correlation coefficient will tend to have
higher values in Group 1.

A variable with a negative correlation coefficient will tend to have
lower values in Group 2.

Variable	Correlation Coefficient	Description
VAR070	.8979	Number of plants, 1962
VAR069	.8325	Number employed in plants, 1962
VAR001	.7237	Total county population/100
VAR036	.5549	SMSA
VAR011	.4551	Ratio--Blacks 25+ finished 12th grade: blacks 25+
VAR024	.4534	Percent of county population in urban areas
VAR031	.4515	Median income all families and unrelated individuals
VAR005	.4383	Median school years, blacks 25+
VAR027	.4152	Percent of employed in white collar occupations
VAR003	.4124	Median school years, males 25+
VAR030	-.4175	Percent of families below poverty level
VAR009	-.4442	Ratio--Blacks 25+ LT 9th grade: blacks 25+
VAR010	-.4555	Ratio--Blacks 25+ LT 12th grade: blacks 25+

Crosstab of Cluster Prediction for New Plants

		Predicted Groups	
		1	2
Actual	1	9	0
Groups	2	0	122
Number misclassified = 0, 0.000 of total			

Chapter IV

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Till's¹ work provides evidence that there is a natural process of rural development in which marginal industry moves to the rural areas and hires workers from agriculture and subsequently, as development occurs, higher wage industry recruits workers from the marginal industries. In this way, work forces tend to be upgraded over a long period of time. Although the natural process is occurring -- there is considerable rural economic development, manufacturing employment is growing faster in nonmetropolitan than in metropolitan areas -- it still tends to bypass some areas (especially those which are predominately agricultural or have black population concentrations) and some people (especially those with limited work experiences, skills, or education).

In partial recognition of these bypasses, North Carolina established the "Governor's Award Program" (GAP), which enhances the

1. Thomas E. Till, Rural Industrialization and Southern Rural Poverty in the 1960's (unpublished Ph.D. dissertation, Austin, Texas: University of Texas, 1972) and Thomas E. Till, with assistance of Ray Marshall, Industrialization in Poverty in Nonmetropolitan Labor Markets (paper prepared for the second meeting of the Task Force on Southern Rural Development, Nashville, Tennessee, November 22, 1974).

opportunities for smaller rural communities to become relocation sites. However, the GAP is still basically a physical attributes, industrial park development process, with little heed paid to the specific human resources attributes, potentials, or needs of the local populace. Since industrial developers are responsible for the program, little else could or should be expected, for their orientation is that of satisfying industry's needs.

Additional evidence of these bypasses by the industrial developers is the effort now being made by the U.S. Department of Agriculture to train its extension agents to be industrial developers, a totally inappropriate role for an agriculturally oriented person.

The Concerted Services in Training and Education (CSTE) program, originally designed to provide better coordination and utilization of existing occupational education programs in small towns and rural areas is an example of the type of program which could be used to bring the work of the human resource developer and the industrial developer together for the benefit of the rural area. Basically:

The CSTE program grew out of a recognition that rural areas had a much higher rate of poverty than urban areas, but at the same time had lower average educational attainment and received a proportionately smaller share of federal funds than urban areas. The CSTE approach was conceived to help solve this dilemma in two ways: (1) the CSTE coordinator would provide expertise and assistance that would enable rural communities to compete more successfully with urban areas for federal grants; and (2) CSTE would help existing programs -- local as well

as federal -- to be effective, tailoring them to the functional needs of the community. The primary emphasis was on occupational education programs -- vocational education, manpower training, adult basic education.²

The concept behind CSTE is valid and has proven effective. The caveat which must be offered is that it must not be allowed to degenerate into a "grantsmanship" program in which the coordinator is so busy searching for grants that he can not find time to serve as the human resource developer; this has occurred already in some South Texas areas.

There are, in addition to Till's evidence, North Carolina's GAP, the Department Agriculture's efforts, and the CSTE program (all of which indicate a recognition of need for the bypassed area and activity to alleviate the need), vast numbers of anecdotes concerning rural industrial development. These anecdotes are so numerous, so well publicized, and so convincing that without careful examination of the empirical data, one can easily derive from them a misconception that there has been a significant shift in relocation trends.

2. Ray Marshall, James L. Walker, and R. Lynn Rittenoure, Human Resource Development in Rural Texas, Studies in Human Resource Development No. 1 (Austin, Texas: Center for the Study of Human Resources, University of Texas, 1974), pp. 79-80.

However, despite all of the above and the claims by proponents of start-up industry training programs, the empirical data does not support a hypothesis that the existence of this type of program in rural areas has resulted in a change in industrial relocation trends towards those areas.

Since there was no discernable change in industrial relocation trends because of the presence of industrial development training programs in the rural area, the second hypothesis: "the presence of such a program had resulted in a 'leapfrogging' effect in the labor force, particularly in the areas of greatest human resource development need, the rural area," became a moot point.

Moreover, the expressed attitudes of both industry spokesmen and industrial developers concerning employment opportunities for the unemployed and disadvantaged are negative. Both industry and program officials are extremely frank in stating that they are primarily interested in experienced, underemployed workers who can be quickly upgraded in pursuit of the immediate profit motive as opposed to those who would have to be "leapfrogged" into the labor force.

Thus the answer to the previous rhetorical question, "Are they (the programs) also by chance human resource development programs for those in greatest need of development?," must be "No."

Without support for a hypothesis concerning the programs as vehicles for human resource development, any discussion of the human resource development cost-benefit ratio also becomes moot.

The programs are as advertised -- excellent industrial relocation sales tools. They are an indirect subsidy to industry, offered in competition with other states and locales as an inducement for relocation into an area where successful programs have been conducted in the past.

Recommendations

Since the programs are such excellent industrial relocation sales tools, and since the greatest need for industrial/economic development exists in the rural area, and since there is an acknowledged, readily available work force in the bypassed rural areas, the start-up industry training process would seem to be an ideal program for bringing jobs and workers together.

Apparently, the reason that such has not occurred, statistically speaking, in the past is a lack of specific guidance and direction to the industrial developers which would make them as concerned with human resource development as they are with industry's needs.

There are those who have and will argue that the industrial developer can not serve two masters -- industry's profit motive needs and human resource development -- and that the industrial developer's primary responsibility is to industry. In response to that -- the industrial developer's responsibility lies first with the unit that pays his salary -- in most cases the state and the citizens thereof. For if the programs were stripped of all their trappings and the citizens were required to choose between an industry subsidy or the development of the state's human resources -- in today's anti-business climate there can be little question as to which would lose -- the industry subsidy.

Therefore, it is time that those states with start-up industry training programs (industrial subsidies) re-orient their programs and establish Human Resource/Industrial Development programs with human resource development given top priority.

To accomplish this end, the following policy guidelines are recommended:

1. An independent agency, adequately and realistically funded, responsible to the state's chief executive officer and legislature, should be organized. The agency would be responsible for the conduct of the Human Resource/Industrial Development Program, with primary emphasis on development of the state's human resources and would be accountable to the state legislature for the funds expended in the accomplishment of the dual goals. In this way, the situation in which over half of the dollars expended are for demand creation and slightly less than half are expended for industry subsidy, with only tangential benefit to those in greatest need of assistance to become productive workers, would be precluded.

2. The organization should contain four sub-units. The Human Resource Development (HRD) Unit would be responsible for identifying manpower resources and their availability, education, training and experience levels, industrial requirements, the differences between education/training and experience and requirements, the establishment of training goals and objectives for the Education/Training Unit, and the recruitment, classification, selection, and placement of personnel. The Education/Training (E/T) Unit would be responsible for conducting the programs (directly or under contract) necessary to fulfill the stated education/training requirements set forth by the Human Resource Development and Industrial Development Units. The Industrial Development (ID) Unit would be responsible for demand creation and liaison with relocating industries. The Agency Headquarters (AH) Unit would be responsible for coordinating the work of the other three units, for the overall accomplishment of the agency's goals, and accountability to the state's chief executive officer and legislature. An organization with this type of centralized power, responsibility and accountability is contrary to that currently in vogue and to that recommended

by Harper, Cotton, and Little, Inc.³ for the state of Texas. Currently, the industrial development units and the education/training units are separate and equal, with the industrial developers being more equal in that they dictate where the training will be done, what it will be, and, to a large extent, when and how. As long as the industrial developers maintain their current control of the process, the program will remain an excellent sales tool and industrial subsidy.

3. The agency head must be a strong, dedicated, and knowledgeable individual with expertise in the areas of regional and labor economics, vocational educational and industrial training, and industrial development procedures and methodologies, since individuals with whom he will be required to deal will include the governor, legislature, local citizens' groups, industry spokesmen, and other state officials who have lost or are having challenged areas of vested interest for which this agency would now be responsible.

4. The agency would marshal the effort of local industrial development groups, CSTE program sponsors, and all other state entities concerned with human resources and industrial development to focus their efforts on the new goals of, first, human resource development, and second, industrial development.

5. With such an organization, backed by and responsible and accountable to the governor and the state legislature, the following replication procedure should result in a true human resource/industrial development program.

3. Harper, Cotton, and Little, Inc., Final Report, op. cit.

Procedure for Replication

The Director of the Human Resource-Industrial Development Board (HRIDB), in the accomplishment of the board's dual goals, would report to the governor's office and the appropriate committees of the state legislature; would coordinate the board's activities with the governor's manpower planning staff, the legislative budget board, the industrial commission, employment commission, the education agency and its associates in the forms of any coordinating boards, the junior colleges, the technical institutes, and the independent school districts; and where appropriate, work with rural area development councils and the various other economic development offices. Within the HRIDB, the board's various units would be responsible for interface with appropriate counterparts throughout the state during the process.

The process itself essentially would be an expanded Industrial Development Training Model.

In the demand creation stage, the Industrial Development Unit would be responsible for the conduct of the advertising and promotion campaign, for specific prospect sales activity, and for liaison with local industrial developers.

During the labor force analysis stage, the Human Resources Unit would be responsible for the conduct of the necessary manpower surveys, labor force availability studies, and the manpower resource evaluations derived from those efforts.

During the master planning stage, the Industrial Development Unit, Human Resource Unit, and Education/Training Unit would all be involved, at one time or another, in the various steps. The responsibility for company liaison would remain with the Industrial Development Unit. While all of the units would be involved in the design of the training program, once the program was designed, the Education/Training Unit would do the detailed project planning, prepare the

specifications which would be met by the Training Activity, and work with the Training Activity during its study of project requirements. The Training Activity, under the supervision of the Education/Training Unit, would be responsible for the performance planning of the actual training itself and the attendant proposal preparation and project budgeting.

Upon completion of the above, the Industrial Development Unit would be responsible for the necessary contract negotiations and the completion of the training program agreement with the industrial prospect.

Concurrent with the above stage, and exerting a great deal of influence on it, would be the lead time scheduling, which would be jointly prepared by all those units with the guidance from the Industrial Development Unit.

With the completion of lead time scheduling and the necessary orientations (conducted under the guidance of the Industrial Development Unit), the training preparation stage would be initiated. During this stage, training aids would be prepared to support the necessary training materials; equipment would be obtained and positioned in the appropriate training spaces; and the necessary instructors would be obtained and trained, all under the supervision of the Education/Training Unit and the Training Activity. The Industrial Development Unit would provide the necessary support to obtain special equipment, as well assisting in instructor recruitment from the industry, if required.

When appropriate, in accordance with the lead time schedule, the Human Resource Unit, with assistance from the Education/Training Unit, the Training Activity, and the Employment Commission, would commence the recruitment, testing, classification, and selection of trainees.

Under the auspices of the Education/Training Unit, the Training Activity would provide the necessary skill development during that stage. The Industrial Development Unit and the Agency Headquarters Unit would continuously monitor and supervise the training to ensure that the contract is being fulfilled, within budget, and in a fiscally responsible manner.

During the skill development stage and in preparation for the job placement stage, all of the Board's units would provide progress measurement reports and evaluations to ensure that both the human resource and industrial development goals are being attained.

Throughout the total project, from initial prospect contact until the trained workers are performing to industry's satisfaction, the Agency Headquarters Unit would be concerned with detailed project management.*

The process as set forth above is straightforward and mechanical, and does not stress the personality factors which are involved. This program as presented is an innovative effort which will require both interpersonal and management skills and dedication of the highest order. The personnel involved will be required to sell the program to state and local officials, to industry, to other agencies who see the program as a challenge to their vested interests and to the taxpayers of the state. They will have to sell the program to the economic development organization and to the unemployed and disadvantaged. South Carolina's success in finding innovative personnel in the initial stages of its program provides an excellent example for others to emulate.

*A more detailed discussion of each of these steps within the stages is contained in the Harper, Cotton, and Little, Inc. report.

The process of replication set forth above, including the caveat concerning the personality factors, does not guarantee that the programs can be changed from purely an industry subsidy to a human resource development--industrial development vehicle, but it does provide the necessary guidelines for any organization willing to make such an effort.

Further Research

One of the principal inadequacies of the smaller rural communities and bypassed areas, insofar as industrial development is concerned, is the lack of human resource/industrial development expertise upon which to rely for developmental education and planning. Not only is the expertise lacking, but generally speaking, the funds to support such expertise are also lacking.

A human resource/industrial development agent program, patterned after the Department of Agriculture's extension agents and the CSTE coordinator programs, paid for jointly with community, state and federal funds, and responsible for facilitating the implementation of a human resource/industrial development program in those areas of greatest need, is a possibility.

The size of the program -- number and location of agents; the size of the areas of responsibility for each agent; the point at which the subsidy of state and federal funds would no longer be provided due to either current industrial development, population, or some other criteria; what a reasonable subsidy for a trained and educated human resource/industrial development agent would be; and how the expenses should be distributed among the community, state and federal funding agencies are all items of further research which would be required before the implementation of such a program.

Appendix 1
State Funded Worker Training Programs

State	Pre-employment Program										On-the-Job Training									
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9		
Alabama	Y	S	C ⁺	S	S	S	S	J	J	S	Y	S	C	C	C	C	C	J	C	
Arizona	Y	S	O	S	S	S	S	J	S	J	N									
Arkansas	Y	S	O	S	C	S	S	S	S	J	Y	S	C	C	C	C	C	S	J	
Delware	Y	S	S ⁺	S	S	S	S	S	S	S	N									
Georgia	Y	S	SC ⁺	S	C	J	J	J	S	S	Y	S	C	C	C	C	C	C	J	
Hawaii	Y	S	O	S	J	S	S	S	S	S	Y	PROGRAM DATA NOT PROVIDED								
Iowa	Y	S	O	L,C	C	L,C	L,C	C	S,L	L	N									
Kentucky	Y	S	O	J	J	J	J	S	S	S	Y	S	J	C	C	J	J	C	C	
Louisiana	Y	S	C ⁺	J	J	S	S	X	J	J	Y	S	C	J	J	C	J	J	C	
Maine	Y	S	J	S	S	S	S	J	S	J	Y	S	J	S	S	C	C	J	C	
Maryland	Y	S	J	C	J	C	J	J	J	J	Y	J	C	J	J	C	J	J	J	
Mississippi	Y	S	S	S	S	S	S	J	C	J	N									
Nebraska	Y	IN THE PLANNING STAGES										Y	IN THE PLANNING STAGES							
New Mexico	Y	S	O	S	S	J	S	J	J	J	Y	C	C	C	C	C	C	J	J	
New York	N										Y	S	C	S	S	C	C	J	C	
North Carolina	Y	S	O	S	C	J	S	J	J	J	Y	S	C	C	C	J	C	J	J	
Oklahoma	Y	S	X	S	C	X	J	X	J	J	Y	X	C	C	C	C	X	C	X	
Oregon		PENDING LEGISLATION											PENDING LEGISLATION							
Pennsylvania	Y	S	X	S	S	S	S	S	X	X	Y	S	C	C	C	C	C	S	J	
South Carolina	Y	S	O	S	S	S	S	S	S	S	N	PROGRAM DATA NOT PROVIDED								
South Dakota	N										Y	PROGRAM DATA NOT PROVIDED								
Tennessee	Y	S	X	X	X	X	S	J	X	J	N									
Texas	Y	S	O	S	C	J	S	J	J	J	Y	C	C	C	C	C	C	C	C	
Utah	Y	PROGRAM DATA NOT PROVIDED										N								
Virginia	Y	S	X	S	S	S	S	J	J	S	N									
West Virginia	Y	PROGRAM DATA NOT PROVIDED										N								

*Have Program S = State Supplied/Funded X = Data Not Provided
Y = Yes C = Company Supplied/Funded O = Not Provided
N = No L = Local Supplied/Funded + = Optional
J = Joint Company/State

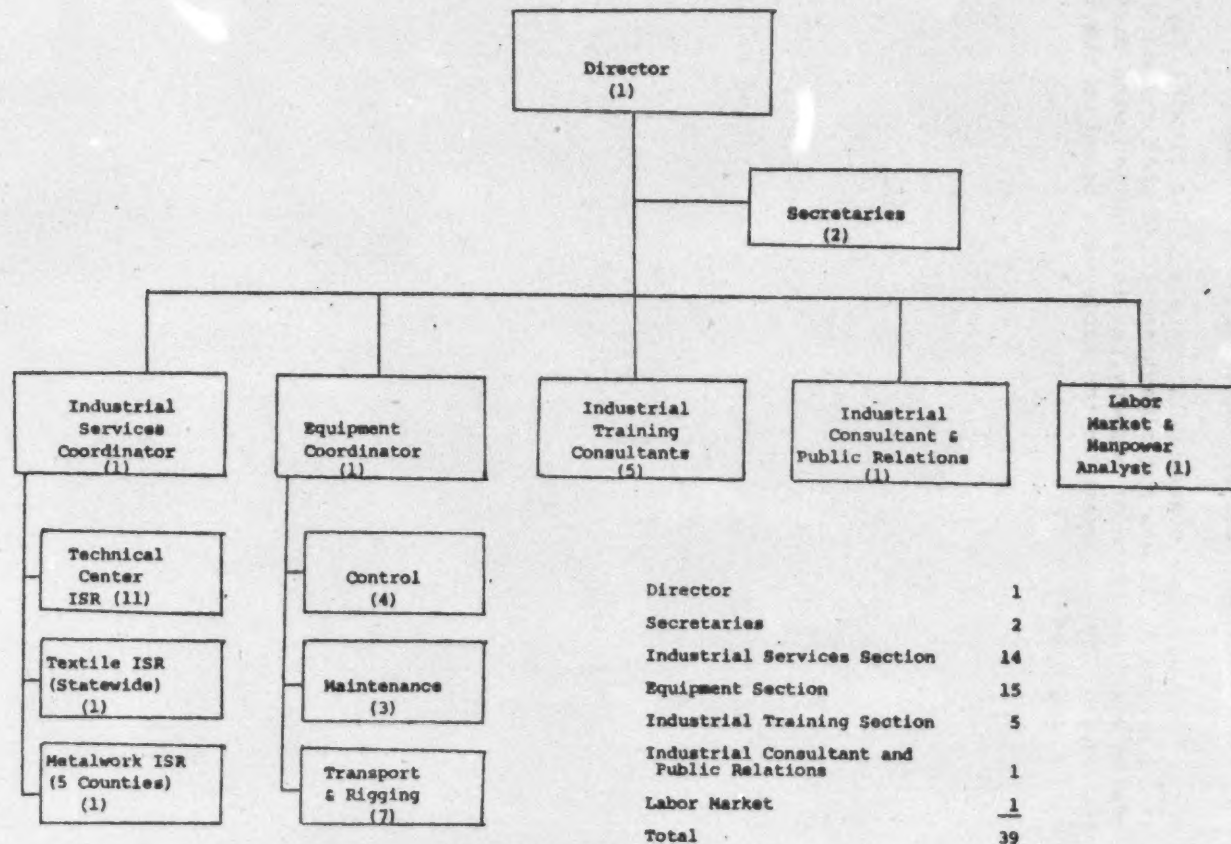
Categorical Key Descriptions for Appendix 1

1. Instructors' Salaries: Self-explanatory.
2. Trainee Wages: Most states do not provide wages for trainees; some states do reimburse trainees in unusual circumstances and several pay transportation costs of trainees.
3. Training Equipment and
4. Unusual Equipment: In cases where equipment is state supplied, equipment owned by the state is used, equipment is rented by the state, or the company is reimbursed for the use of its equipment. When equipment is jointly supplied, determination of the supplier is made according to the requirements of the program under consideration.
5. Training Materials: State supplied training materials are purchased independently by the state or from the company. In most, but not all cases of company supplied materials, the company is permitted to market the finished product. In instances in which materials are jointly supplied, determination of the supplier is based on the amount of abnormal waste or other considerations of the program involved.
6. Training Site: In instances where the site is state supplied, it may be already available in state facilities, outside rented facilities, or company facilities for which compensation is provided. In instances of jointly supplied training sites, costs of a particular site may be shared or one party may bear the total cost depending on the nature of the program under consideration.
7. Trainee Selection: The usual procedure for joint trainee selection is preliminary recruitment, screening and testing by the state with final hiring decision left to the company. Often in instances where only state selection is involved, categorical requirements must be met by the trainee for eligibility.
8. Instructor Selection and Training: In instances of joint instructor selection, policy often provides that a company employee be chosen as instructor, if available. If not, it is usually the responsibility of the state to supply an instructor. Several states provide training in instruction to company employees.
9. Primary Program Planning Responsibility: Although, in nearly every state, program planning receives input from both state and company, in most states, responsibility for generating a master program plan rests with one party. In instances where this does not hold, there is joint responsibility.

Categorical Key Descriptions (continued)

Note: Because many states deliberately build flexibility into their programs, it was not always specified what responsibilities rested with the state or company, as this varied with different companies. The judgments in the table were based on the information received.

Appendix 2
Organizational Chart -- South Carolina Industrial Services Division

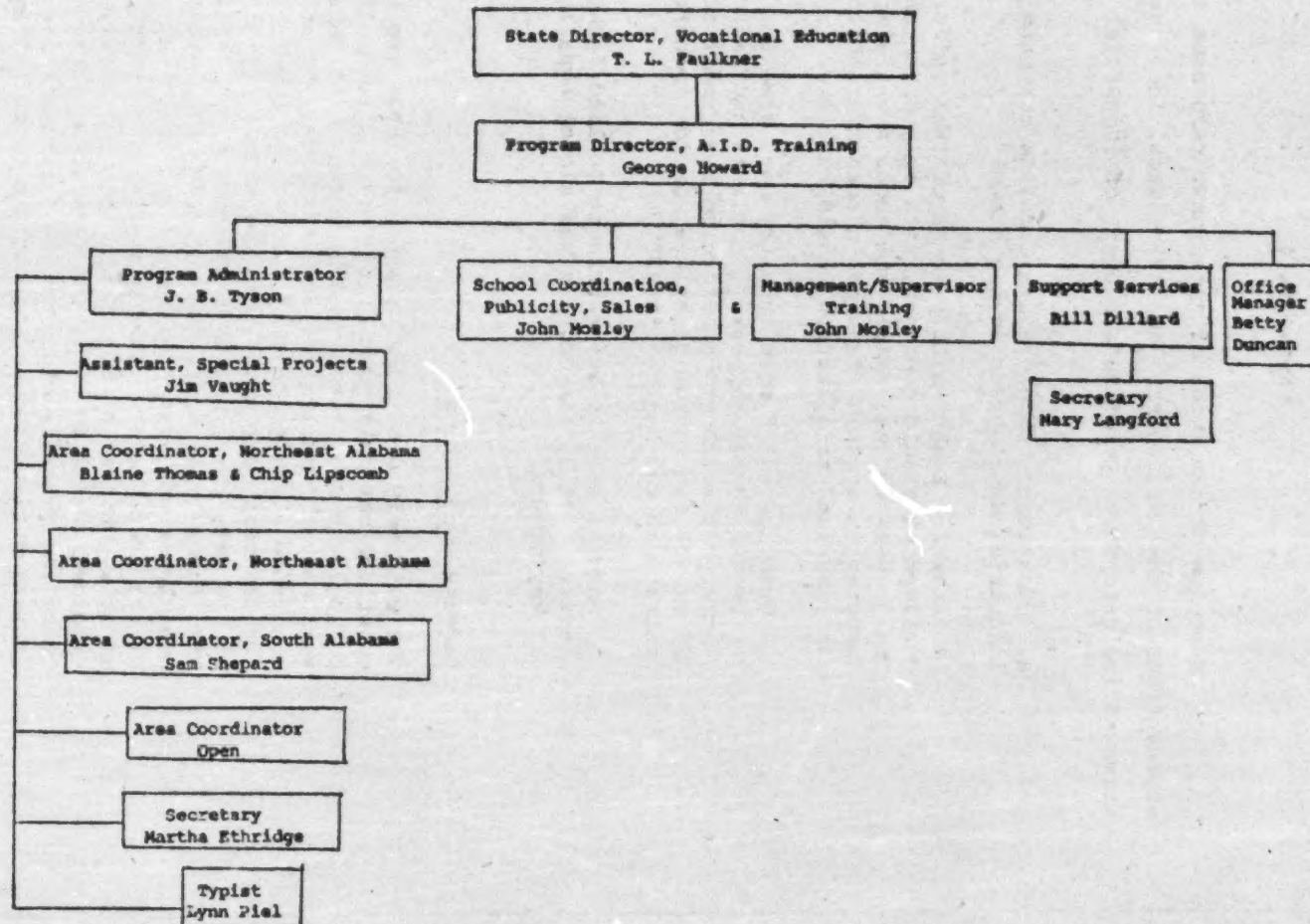


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122

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Appendix 3
Organizational Chart -- Alabama Industrial Development Training Program



Appendix 4

Examples of the types of questions, responses and summary observations of the Louis Harris and Associates, Inc. survey are shown to indicate South Carolina's support of industrial development:

a. Question: "Should South Carolina continue to promote industrial development in the state?"

Answer: Eighty-nine percent of the public replied that development should continue, with only 6 percent opposed. The consensus was nearly unanimous among almost every demographic group. Even among preservationists, 74 percent say industrialization should continue.

b. Question: "If more industry does come in, which would you prefer to see happen: for plants and factories to be scattered throughout the state so that small communities add one or two factories apiece, or for industry to concentrate in the major cities?"

Answer: Eighty-seven percent replied "scatter the new plants." Again, the opinion was almost equally strong among all key groups.

Summary Observation:

The extremely one-sided response to these two basic questions not only summarizes the results of the survey, but unlocks the reasoning behind many other answers as well. South Carolinians, for instance, are not deeply concerned about preserving their environment because for the most part growth has not entailed the horrors of big city life, no do they expect it to in the future. They favor local management of industrial growth, because they apparently expect diversification to be implemented at the state level. They want the economy to continue to grow, and see no reason why they can't reap the benefits of growth while avoiding the drawbacks. Again, it is because the mental picture of the future involves many factories dispersed throughout the state. They are concerned about drugs, delinquency, crime, and housing problems, but they want more than anything to see an increased level of technological training and education as a means of avoiding low-paying, lower-class jobs.

They want industry to improve wages, they want it to contribute more to supervision, and they want it to contribute more to community development -- all these expectations are predicted on a diversified and dispersed economy which will allow residents to retain the good life of which they are justly proud.

For the State Development Board, then, the mandate is very clear, although no doubt far more complex to implement than most citizens recognize: development in virtually any form, as long as it does not undermine the quality of life. The state is fortunate indeed to still be in a position to grow in this ideal manner.

Insofar as training is concerned, the following responses were received:

A series of specific questions about the state-sponsored training programs and TEC schools began by asking whether or not people had heard of them, and an overwhelming 82 percent had. Only among blacks and those with only a grade school education did the recognition level drop below 70 percent.

Observation:

As noted earlier, the TEC programs' lowest penetration has so far been among the lowest income groups. While this has no doubt been inevitable in the past, in the future the state may wish to devise different kinds of industrial recruiting and training programs to help those least adapted to technical work.

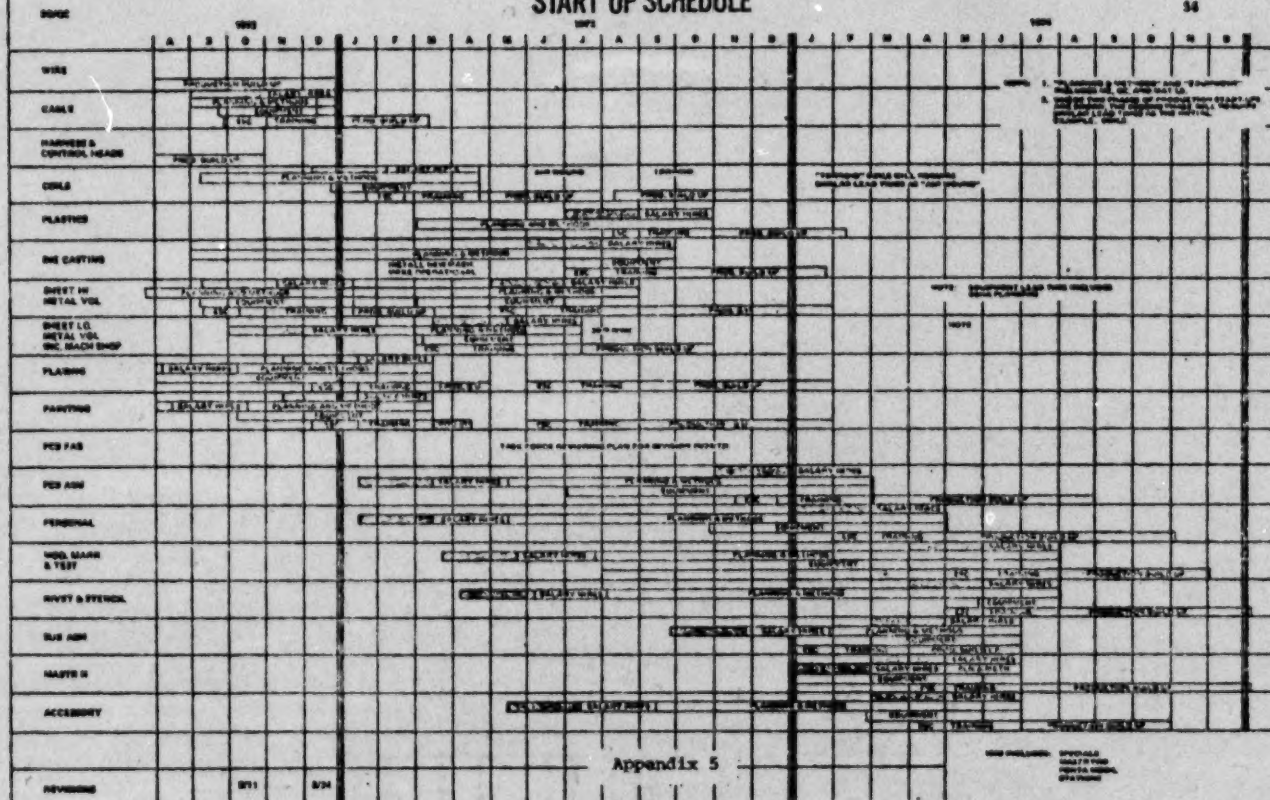
Of those who had heard of the state training programs at all, an impressive two-thirds actually knew someone personally who had taken part in one of another of them. More young people, whites, residents of the Coastal Plain and those with a college education and in the higher income groups were personally acquainted with participants in the programs than anyone else, again indicating that the programs have had a "middle-class" orientation in the past.

Equally as encouraging as the high recognition factor, 71 percent of all those who are aware of the TEC schools and training programs rate them "very effective" in placing people in better jobs, and another 20 percent say "somewhat effective." Only one percent consider them ineffective. Blacks, those with a grade school education, and residents of the Ph.D. Basin were less enthusiastic than others, but still positive about the program's effectiveness.

Finally, when asked whether the state should expand the programs, 83 percent felt it should; virtually no one feels that they should be cut back, and only 11 percent would like them maintained at their present level.*

*Louis Harris and Associates, Inc., The Priorities for Progress in South Carolina, Study Number 2130, Columbia, South Carolina: Louis Harris and Associates, Inc. (1971).

START UP SCHEDULE



Appendix 6

List of Variables in Start Up Training Data Bank

VAR001	Total County Population / 100
VAR002	Ratio -- White All Ages: Blacks All Ages
VAR003	Median School Years, Males 25+
VAR004	Median School Years, Females 25+
VAR005	Median School Years, Blacks 25+
VAR006	Ratio -- Whites 25+ LT 9th Grade: Whites 25+
VAR007	Ratio -- Whites 25+ LT 12th Grade: Whites 25+
VAR008	Ratio -- Whites 25+ Finished 12th Grade: Whites 25+
VAR009	Ratio -- Blacks 25+ LT 9th Grade: Blacks 25+
VAR010	Ratio -- Blacks 25+ LT 12th Grade: Blacks 25+
VAR011	Ratio -- Blacks Finished 12th Grade: Blacks 25+
VAR012	Ratio -- Whites 16+ in Labor Force: Whites 16+
VAR013	Ratio -- Whites 16+ in Civilian Labor Force: Whites 16+
VAR014	Ratio -- Whites 16+ Unemployed: Whites 16+
VAR015	Ratio -- Blacks 16+ in Labor Force: Blacks 16+
VAR016	Ratio -- Blacks 16+ in Civilian Labor Force: Blacks 16+
VAR017	Ratio -- Blacks 16+ Unemployed: Blacks 16+
VAR018	White Index of Occupational Position
VAR019	Black Index of Occupational Position
VAR020	White Index of Industrial Position
VAR021	Black Index of Industrial Position
VAR022	Wage-Controlled Black Index of Occupational Position
VAR023	Wage-Controlled Black Index of Industrial Position
VAR024	Percent of County Population in Urban Areas
VAR025	Percent of County Population in Rural Non-Farm Areas
VAR026	Percent of Employed in Manufacturing Industries
VAR027	Percent of Employed in White Collar Occupations
VAR028	Percent of Employed Working Outside County of Residence

Appendix 6 (continued)

VAR029	Percent of Employed Working 50 to 52 weeks
VAR030	Percent of Families Below Poverty Level
VAR031	Median Income All Families and Related Individuals
VAR032	Median Income Black Families and Unrelated Individuals
VAR033	Unemployment Level
VAR034	Adjusted Unemployment Level
VAR035	Subemployment Level
VAR036	SMSA
VAR037	Change 60-70, Total County Population
VAR038	Change 60-70, Whites All Ages / Blacks All Ages
VAR039	Change 60-70, Median School Years, Males 25+
VAR040	Change 60-70, Median School Years, Females 25+
VAR041	Change 60-70, Median School Years, Blacks 25+
VAR042	Change 60-70, Whites 25+ LT 9th Grade / Whites 25+
VAR043	Change 60-70, Whites 25+ LT 12th Grade / Whites 25+
VAR044	Change 60-70, Whites 25+ Finished 12th Grade / Whites 25+
VAR045	Change 60-70, Blacks 25+ LT 9th Grade / Blacks 25+
VAR046	Change 60-70, Blacks 25+ LT 12th Grade / Blacks 25+
VAR047	Change 60-70, Blacks Finished 12th Grade / Blacks 25+
VAR048	Change 60-70, Whites 16+ in Labor Force / Whites 16+
VAR049	Change 60-70, Whites 16+ in Civilian Labor Force / Whites 16+
VAR050	Change 60-70, Whites 16+ Unemployed / Whites 16+
VAR051	Change 60-70, Blacks 16+ in Labor Force / Blacks 16+
VAR052	Change 60-70, Blacks 16+ in Civilian Labor Force / Blacks 16+
VAR053	Change 60-70, Blacks 16+ Unemployed / Blacks 16+
VAR054	Change 60-70, White Index of Occupational Position
VAR055	Change 60-70, Black Index of Occupational Position
VAR056	Change 60-70, White Index of Industrial Position

Appendix 6 (continued)

VAR057	Change 60-70, Black Index of Industrial Position
VAR058	Change 60-70, Wage-Controlled Black Index of Occupational Position
VAR059	Change 60-70, Wage-Controlled Black Index of Industrial Position
VAR060	Change 60-70, Percent of County Population in Urban Areas
VAR061	Change 60-70, Percent of Population in Rural Non-Farm Areas
VAR062	Change 60-70, Percent of Employed in Manufacturing Industry
VAR063	Change 60-70, Percent of Employed in White Collar Occupations
VAR064	Change 60-70, Percent Working Outside County of Residence
VAR065	Change 60-70, Percent Working 50 to 52 Weeks
VAR066	Change 60-70, Percent of Families Below Poverty Level
VAR067	Change 60-70, Median Income, All Families and Unrelated Individuals
VAR068	Change 60-70, Median Income, Black Families and Unrelated Individuals
VAR069	Number Employed in Plants, 1962
VAR070	Number of Plants, 1962
VAR071	Number of Jobs Created by New Plants, 1962-73
VAR072	Number of New Plants, 1962-73
VAR073	Piedmont
VAR074	Coastal Region
VAR075	Central Region (South Carolina Only)
VAR076	Mountain Region (North Carolina Only)
VAR077	A County with a Technical Center
VAR078	A County Sponsoring a Technical Center (South Carolina Only)
VAR079	A County Adjacent to a County with a Technical Center
VAR080	Dummy Set to One for South Carolina, Set to Zero for North Carolina

Appendix 7a

VAR071 Number of Jobs Created By New Plants, 1962-74

<u>Beta Coefficient</u>	<u>Variable Number</u>	<u>Variable Description</u>	<u>Cumulative RSQ</u>
1.9007997	VAR 001	Total county population	.62365
-6.4959377	VAR 002	Ratio--Whites all ages: Blacks all ages	.62413
9151.1453	VAR 013	Ratio--Whites 14+ in Civilian Labor Force: Whites 14+	.67802
-1267.1907	VAR 047	Change 60-70, Blacks Finished 12th Grade/Blacks 25+	.67829
2927.5615	VAR 054	Change 60-70, White Index of Occupational Position	.67998
5115.4048	VAR 044	Change 60-70, Whites 25+ finished 12th Grade/Whites 25+	.68058
-.14025054	VAR 019	Black Index of Occupational Position	.68576
-711.23796	VAR 028	% of Employed Working Outside County of Residence	.69975
-6979.9089	VAR 017	Ratio--Blacks 14+ Unemployed: Blacks 14+	.70082
498.27947	VAR 062	Change 60-70, % of Employed in Manufacturing Industry	.70122
4279.3208	VAR 029	% of Employed Working 50-52 Weeks	.70759
-1.1435695	VAR 018	White Index of Occupational Position	.70937
11701.494	VAR 015	Ratio--Blacks 14+ in Labor Force: Blacks 14+	.70990
958.23063	VAR 065	Change 60-70, % Working 50-52 Weeks	.71293
5122.703	VAR 040	Change 60-70, Median School Years, Females 25+	.71613

Appendix 7a (continued)

<u>Beta Coefficient</u>	<u>Variable Number</u>	<u>Variable Description</u>	<u>Cumulative RSQ</u>
-1708.8511	VAR 037	Change 60-70, Total County Population	.71619
-4.3477253	VAR 068	Change 60-70, Median Income, Blacks, Families & Related Individuals	.71624
11543.116	VAR 043	Change 60-70, Whites 25+ LT 12th Grade/Whites 25+	.71945
11616.035	VAR 045	Change 60-70, Blacks 25+ LT 9th Grade/Blacks 25+	.71975
3690.6689	VAR 055	Change 60-70, Black Index of Occupational Position	.72006
-3562.1190	VAR 012	Ratio--Whites 14+ in Labor Force: Whites 14+	.72303
-14381.140	VAR 066	Change 60-70, % of Families Below Poverty Level	.73492
-1.7679340	VAR 061	Change 60-70, % of Population In Rural Nonfarm Areas	.73493
1795.4533	VAR 025	% of County Population in Rural Nonfarm Areas	.73526
650.59760	VAR 004	Median School Years, Females 25+	.73535
-799.87762	VAR 067	Change 60-70, Median Income, All Families & Unrelated Individuals	.73859
.12877999	VAR 069	# Employed in Plants, 1962	.75864
-1.2298720	VAR 023	Wage-controlled Black Index of Industrial Position	.76200
-8417.4788	VAR 056	Change 60-70, White Index of Industrial Position	.76202
23606.992	VAR 033	Unemployment Level	.76350
-.74070093	VAR 032	Median Income Black Families and Unrelated Individuals	.77326
84919.064	VAR 010	Ratio--Blacks 25+ LT 12th Grade: Blacks 25+	.77363

Appendix 7a (continued)

<u>Beta Coefficient</u>	<u>Variable Number</u>	<u>Variable Description</u>	<u>Cumulative RSQ</u>
17301.007	VAR 059	Change 60-70, Wage-controlled Black Index of Industrial Position	.77461
3867.3803	VAR 027	% of Employed in White Collar Occupations	.78098
-2.9758805	VAR 070	# of Plants, 1962	.78529
.0858162349	VAR 021	Black Index of Industrial Position	.78653
3.6634688	VAR	White Index of Industrial Position	.78999
1106.7753	VAR 024	% of County Population in Urban Areas	.79016
2433.1583	VAR 006	Ratio--Whites 25+ LT 9th Grade: Whites 25+	.79141
1.9933746	VAR 022	Wage--Controlled Black Index of Occupational Position	.79588
8919.3463	VAR 035	Subemployment Level	.79966
-15139.809	VAR 008	Ratio--Whites 25+ Finished 12th Grade: Whites 25+	.80417
-9104.0100	VAR 016	Ratio--Blacks 14+ in Civilian Labor Force: Blacks 14+	.80729
-26297.685	VAR 046	Change 60-70, Blacks 25+ LT 12th Grade/Blacks 25+	.80850
284.31983	VAR 003	Median School Years, Males 25+	.80972
-8254.9841	VAR 057	Change 60-70, Black Index of Industrial Position	.81205
-710.29073	VAR 005	Median School Years, Black 25+	.81223
-6266.1437	VAR 034	Adjusted Unemployment Level	.81263
-.95468171	VAR 031	Black Index of Industrial Position	.81296
7826.6880	VAR 030	% of Families Below Poverty Level	.81394

Appendix 7a (continued)

<u>Beta</u> <u>Coefficient</u>	<u>Variable</u> <u>Number</u>	<u>Variable Description</u>	<u>Cumulative</u> <u>RSQ</u>
-21901.131	VAR 009	Ratio--Blacks 25+ LT 9th Grade: Blacks 25+	.82213
-11044.178	VAR 007	Ratio--Whites 25+ LT 12th Grade: Whites 25+	.82365
57409.971	VAR 011	Ratio--Blacks 25+ Finished 12th Grade: Blacks 25+	.82425

Constant: -96309.116

Overall F: 6.81368

Significance level: .000

F-tests showed that state, region, SMSA, and TEC were insignificant as predictors.

Appendix 7b

VAR072 Number of New Plants, 1962-73

<u>Beta Coefficient</u>	<u>Variable Number</u>	<u>Variable Description</u>	<u>Cumulative RSQ</u>
-.00810702573	VAR 001	Total County Population/100	.61013
.23150863	VAR 002	Ratio--Whites All Ages: Blacks All Ages	.61482
10.595214	VAR 013	Ratio--Whites 14+ in Civilian Labor Force: Whites 14+	.68544
2.8358872	VAR 047	Change 60-70, Blacks Finished 12th Grade/Blacks 25+	.68836
-28.153023	VAR 049	Change 60-70, Whites 14+ in Civilian Labor Force/Whites 14+	.68856
.54.454689	VAR 054	Change 60-70, White Index of Occupational Position	.68908
8.2078476	VAR 044	Change 60-70, Whites 25+ Finished 12th Grade/Whites 25+	.69716
-.0119551180	VAR 019	Black Index of Occupational Position	.70467
-31.090564	VAR 042	Change 60-70, Whites 25+ LT 12th Grade/Whites 25+	.70614
-8.0308113	VAR 017	Ratio--Blacks 14+ Unemployed/ Blacks 14+	.70672
4.8931163	VAR 028	% of Employed Working Outside of County of Residence	.70815
10.613378	VAR 029	% of Employed Working 50 to 52 Weeks	.71219
10.827924	VAR 065	Change 60-70, % Working 50 to 52 Weeks	.71672
-.91932716	VAR 068	Change 60-70, Median Income Black Families and Unrelated Individuals	.71696
-.0010139553	VAR 018	White Index of Occupational Position	.71789

Appendix 7b (continued)

<u>Beta</u> <u>Coefficient</u>	<u>Variable</u> <u>Number</u>	<u>Variable Description</u>	<u>Cumulative</u> <u>RSQ</u>
1.1937392	VAR 062	Change 60-70, % of Employed in Manufacturing Industry	.71790
15.918649	VAR 048	Change 60-70, Whites 14+ in Labor Force/Whites 14+	.72089
-4.4623856	VAR 037	Change 60-70, Total County Population	.72155
15.531288	VAR 036	SMSA	.72411
17.597568	VAR 045	Change 60-70, Blacks 25+ LT 9th Grade/Blacks 25+	.72708
33.696502	VAR 040	Change 60-70, Median School Years, Females 25+	.72901
8.4079449	VAR 055	Change 60-70, Black Index of Occupational Position	.73050
-38.759730	VAR 012	Ratio--Whites 14+ in Labor Force/Whites 14+	.73089
-24.377859	VAR 066	Change 60-70, % of Families Below Poverty Level	.73324
12.499025	VAR 061	Change 60-70, % of Population in Rural Non-farm Areas	.73328
92.456393	VAR 043	Change 60-70 Whites 25+ LT 12th Grade/Whites 25+	.73839
-4.5477839	VAR 025	% of County Population in Rural Non-Farm Areas	.73887
112.84454	VAR 015	Ratio-Blacks 14+ in Labor Force: Blacks 14+	.73921
.0000995450327	VAR 069	Number Employed in Plants, 1962	.85296
-.0217992309	VAR 023	Wage-Controlled Black Index of Industrial Position	.85596
-4.0273656	VAR 067	Change 60-70, Median Income, All Families & Unrelated Indiv.	.85597
15.024021	VAR 004	Median School Years, Females 25+	.86038

Appendix 7b (continued)

<u>Beta Coefficient</u>	<u>Variable Number</u>	<u>Variable Description</u>	<u>Cumulative RSQ</u>
39.981914	VAR 056	Change 60-70, White Index of Industrial Position	.86119
205.57886	VAR 033	Unemployment Level	.86123
-.00435112191	VAR 032	Median Income Black Families & Unrelated Individuals	.86576
21.506061	VAR 026	% of Employed in Manufacturing Industries	.86631
-119.95062	VAR 010	Ratio--Blacks 25+ LT 12th Grade: Blacks 25+	.86640
190.03373	VAR 059	Change 60-70, Wage-Controlled Black Index of Industrial Position	.86819
-.00142090196	VAR 031	Median Income all Families & Unrelated Individuals	.87053
-27.771514	VAR 027	% of Employed in White Collar Occupations	.87133
.35492979	VAR 070	# of Plants, 1962	.93163
3.3813901	VAR 024	% of County Population in Urban Areas	.93207
.0280926775	VAR 020	White Index of Industrial Position	.93539
-94.669779	VAR 008	Ratio--Whites 25+ Finished 12th Grade: Whites 25+	.93694
.0206938090	VAR 022	Wage-Controlled Black Index of Occupational Position	.93862
74.284487	VAR 035	Subemployment Level	.94013
-82.678173	VAR 016	Ratio-Blacks 14+ in Civilian Labor Force: Blacks 14+	.94101
69.942744	VAR 046	Change 60-70, Blacks 25+ LT 12th Grade/Blacks 25+	.94155
4.5631363	VAR 003	Median School Years, Males 25+	.94250
-9.7918115	VAR 005	Median School Years, Blacks 25+	.94390

Appendix 7b (continued)

<u>Beta</u> <u>Coefficient</u>	<u>Variable</u> <u>Number</u>	<u>Variable Description</u>	<u>Cumulative</u> <u>RSQ</u>
.00895885909	VAR 021	Black Index of Industrial Position	.94393
-186.94642	VAR 034	Adjusted Unemployment Level	.94473
-138.95741	VAR 057	Change 60-70, Black Index of Industrial Position	.94642
157.60658	VAR 006	Ratio--Whites 25+ LT 9th Grade: Whites 25+	.94926
32.893445	VAR 030	% of Families Below Poverty Level	.94930
-83.763362	VAR 009	Ratio--Blacks 25+ LT 9th Grade: Blacks 25+	.94996
-102.64057	VAR 007	Ratio--Whites 25+ LT 12th Grade: Whites 25+	.95074
-119.89920	VAR 011	Ratio--Blacks 25+ Finished 12th Grade: Blacks 25+	.95076

Constant = -90.058642

Overall F = 23.96811

Significance level - .000

F Ratio Comparing This Model, Containing SMSA, to Model Not Containing SMSA is 14.1429, Significant at .01% level.

$$\begin{array}{r} 11 \quad .9489 \\ -10 \quad .9370 \\ \hline \quad .0099 \end{array} \quad \begin{array}{r} .0099/1 \\ .0511/72 \\ \hline \end{array} = \begin{array}{r} .0099 \\ .0007 \\ \hline \end{array} = 14.1429$$

F-Tests Showed State, Region, and TEC to be Insignificant as Predictors.

Appendix 8a

Employment Set Membership List

VAR012	Ratio--Whites 14+ in labor force: whites 14+
VAR013	Ratio--Whites 14+ in civilian labor force: whites 14+
VAR014	Ratio--Whites 14+ unemployed: whites 14+
VAR015	Ratio--Blacks 14+ in labor force: blacks 14+
VAR016	Ratio--Blacks 14+ in civilian labor force: blacks 14+
VAR017	Ratio--Blacks 14+ unemployed: blacks 14+
VAR026	Percent of employed in manufacturing industries
VAR027	Percent of employed in white collar occupations
VAR029	Percent of employed working 50 to 52 weeks
VAR033	Unemployment level
VAR034	Adjusted unemployment level
VAR035	Subemployment level
VAR048	Change 60-70, Whites 14+ in labor force/whites 14+
VAR049	Change 60-70, Whites 14+ in civilian labor force/whites 14+
VAR050	Change 60-70, Whites 14+ unemployed/whites 14+
VAR051	Change 60-70, Blacks 14+ in labor force/blacks 14+
VAR052	Change 60-70, Blacks 14+ in civilian labor force/blacks 14+
VAR053	Change 60-70, Blacks 14+ unemployed/blacks 14+
VAR062	Change 60-70, Percent of employed in manufacturing industry
VAR063	Change 60-70, Percent of employed in white collar occupations
VAR065	Change 60-70, Percent working 50-52 weeks
VAR069	Number employed in plants, 1962
VAR070	Number of plants, 1962
VAR071	Number of jobs created in new plants, 1962-73
VAR072	Number of new plants, 1962-73

Appendix 8b
Population Set Membership List

VAR001	Total county population/100
VAR024	Percent of county population in urban areas
VAR025	Percent of county population in rural nonfarm areas
VAR028	Percent of employed working outside county of residence
VAR036	SMSA
VAR037	Change 60-70, total county population
VAR060	Change 60-70, percent of county population in urban areas
VAR061	Change 60-70, percent of population in rural nonfarm areas
VAR064	Change 60-70, percent working outside county of residence

Appendix 8c
Income Set Membership List

VAR018	White index of occupational position
VAR019	Black index of occupational position
VAR020	White index of industrial position
VAR021	Black index of industrial position
VAR022	Wage-controlled black index of occupational position
VAR023	Wage-controlled black index of industrial position
VAR030	Percent of families below poverty level
VAR031	Median income all families and unrelated individuals
VAR032	Median income black families and unrelated individuals
VAR054	Change 60-70, White index of occupational position
VAR055	Change 60-70, Black index of occupational position
VAR056	Change 60-70, White index of industrial position
VAR057	Change 60-70, Black index of industrial position
VAR058	Change 60-70, Wage-controlled black index of occupational position
VAR059	Change 60-70, Wage-controlled black index of industrial position
VAR066	Change 60-70, Percent of families below poverty level
VAR067	Change 60-70, Median income, all families and unrelated individuals
VAR068	Change 60-70, Median income, black families and unrelated individuals

Appendix 8d
Education Set Membership List

VAR003 Median school years, males 25+
VAR004 Median school years, females 25+
VAR005 Median school years, blacks 25+
VAR006 Ratio--Whites 25+ LT 9th grade: whites 25+
VAR007 Ratio--Whites 25+ LT 12th grade: whites 25+
VAR008 Ratio--Whites 25+ Finished 12th grade: whites 25+
VAR009 Ratio--Blacks 25+ LT 9th grade: blacks 25+
VAR010 Ratio--Blacks 25+ LT 12th grade: blacks 25+
VAR011 Ratio--Blacks 25+ finished 12th grade: blacks 25+
VAR039 Change 60-70, median school years, males 25+
VAR040 Change 60-70, median school years, females 25+
VAR041 Change 60-70, median school years, blacks 25+
VAR042 Change 60-70, whites 25+ LT 9th grade/whites 25+
VAR043 Change 60-70, whites 25+ LT 12th grade/whites 25+
VAR044 Change 60-70, whites 25+ finished 12th grade/whites 25+
VAR045 Change 60-70, blacks 25+ LT 9th grade/blacks 25+
VAR046 Change 60-70, blacks 25+ LT 12th grade/blacks 25+
VAR047 Change 60-70, blacks finished 12th grade/blacks 25+

Appendix 8e
Racial Mix Set Membership List

VAR002 Ratio--Whites all ages: Blacks all ages
VAR038 Change 60-70, Whites all ages: Blacks all ages

Appendix 8f

Regional, State Set Membership List

VAR073	Piedmont
VAR074	Coastal region
VAR075	Central region (South Carolina only)
VAR076	Mountain region (North Carolina only)
VAR080	Dummy set to one for South Carolina, set to zero for North Carolina

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